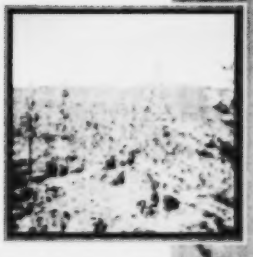

Just THE Facts

A review of silviculture and other forestry statistics

BRITISH COLUMBIA
Ministry of Forests

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April 2000

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General Table of Contents

Acknowledgements iii

Introduction 1

1 Harvesting 3

2 Silviculture 17

3 B.C./Canada Statistics 73

4 World Statistics 95

5 Literature Cited 111

Index 115

INTRODUCTION

Just the Facts is a compendium of frequently referenced British Columbia silviculture and other forestry statistics covering the period 1981/82 to 1997/98.

This period is one of the most significant in British Columbia's forest management history. Between April 1981 and March 1998 the following increases in silviculture programs occurred on Crown land:

- 230% increase in silviculture surveys;
- 67% increase in site preparation;
- 167% increase in area planted;
- 2331% increase in brushing; and
- 162% increase in spacing.

This report contains detailed statistics on these and other silviculture activities. The report is intended for silviculture staff to use as a quick reference to statistical data and charts relating to commonly asked questions. Most British Columbia information is presented by forest region with totals for the province. Where charts follow detailed tables, only the provincial totals have been charted. Statistical information from other provinces and countries is included for comparative purposes.

The report consists of tables and graphs only. No interpretation of the information is provided. If you require an explanation of data or trends, contact the appropriate ministry specialist.

The report is divided into the following major areas:

- B.C. harvesting and silviculture;
- B.C. silviculture activities relative to the rest of Canada; and
- B.C. silviculture activities relative to other countries where forestry is important.

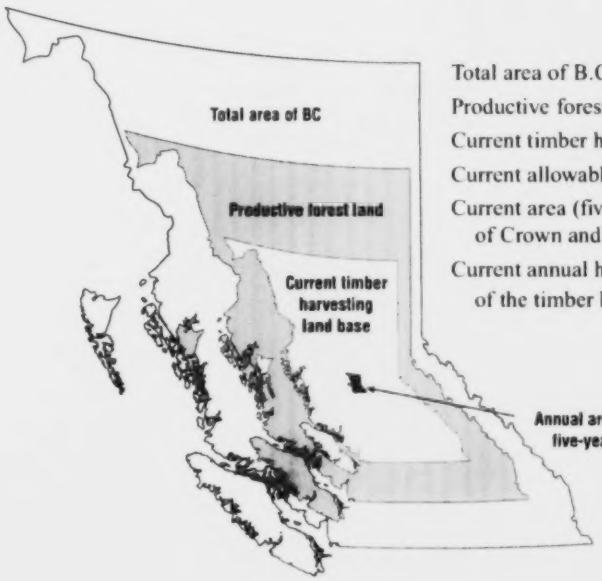
A General Table of Contents is provided at the beginning of the report and detailed tables of contents are located at the beginning of each section. Complete citations for all reports are located in the Literature Cited section.

Just the Facts will be updated periodically.

The Six Forest Regions of British Columbia

* For the purposes of this report, Prince Rupert has been abbreviated to P. Rupert and Prince George to P. George.

Annual Harvested Area vs Timber Harvesting Land Base



Total area of B.C. – 94 780 000 ha

Productive forest land – 48 793 000 ha

Current timber harvesting land base – 23 136 000 ha

Current allowable annual cut – 71 544 000 m^3

Current area (five-year average) of Crown and private land harvested annually – 192 000 ha

Current annual harvest area as a percent of the timber harvest land base – 0.8%

HARVESTING

CONTENTS

1 Harvesting – British Columbia

Area harvested in B.C. from 81/82 to 97/98, by land status 8
Total area harvested (chart) 8
Area harvested on Crown land from 81/82 to 97/98, by region 9
Area harvested on private land from 81/82 to 97/98, by region 9
Area harvested on Crown and private land from 81/82 to 97/98, by region 10
Area harvested by harvest type from 81/82 to 97/98, by region 11
Volume of all products billed from 81/82 to 97/98 on Crown and private land, by region 12
Total volume of all products billed (chart) 12
Forest revenue from 81/82 to 97/98, by region 13
Forest revenue (chart) 14
Average cutblock size on Crown land from 1988 to 1998, by region 15
Provincial average cutblock size (chart) 15

1 HARVESTING – BRITISH COLUMBIA

DID YOU KNOW...

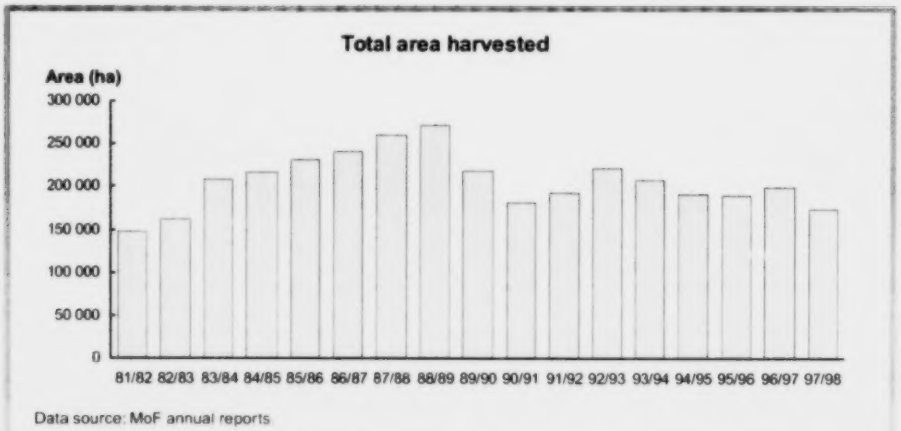
Total Crown and private land harvested reached a peak in 1988/89 with 270 401 hectares and has decreased to 173 801 hectares in 1997/98.

Area harvested (ha)[a] in B.C. from 81/82 to 97/98, by land status

	Crown land				Private land				
Year	TFL[b]	TSA[c]	Other[d]	Subtotal	TFL[e]	TSA[f]	Other[g]	Subtotal	TOTALS
81/82[h]									**147 889**
82/83[h]									**162 172**
83/84	23 212	161 847	3 169	188 228	5 356	4 280	10 388	20 024	**208 252**
84/85	26 368	164 519	7 566	198 453	7 491	3 842	6 631	17 964	**216 417**
85/86	28 560	175 306	6 531	210 397	5 333	4 511	11 489	21 333	**231 730**
86/87	28 142	188 875	9 447	226 464	496		12 917	13 413	**239 877**
87/88	39 020	184 867	15 082	238 969	3 468		17 545	21 013	**259 982**
88/89	29 423	201 109	6 924	237 456	3 040	17 512	12 393	32 945	**270 401**
89/90	20 790	166 932	6 412	194 134	1 235	14 363	8 652	24 250	**218 384**
90/91	19 068	131 207	1 737	152 012	447	27 903	1 168	29 518	**181 530**
91/92	20 141	138 143	8 066	166 350	4 736	18 305	3 598	26 639	**192 989**
92/93	23 457	163 077	10 067	196 601	3 709		21 289[i]	24 998	**221 599**
93/94	33 271	142 571	6 071	181 913	751		25 084[i]	25 835	**207 748**
94/95	23 914	128 576	7 516	160 006	644		29 594[i]	30 238	**190 244**
95/96	23 654	123 737	5 345	164 869	921		23 819[i]	24 740	**189 608**
96/97	22 448	150 671	5 920	179 039	760		19 230[i]	19 990	**199 029**
97/98	21 457	128 484	4 504	154 474	682		18 645[i]	19 327	**173 801**

(a) Includes only blocks where harvesting is completed in the relevant fiscal year.
(b) Includes Crown land within tree farm licences. In 1992/93 and 1994/95, also includes timber licence area.
(c) Includes Crown land within timber supply areas, excluding tree farm licences. From 1992/93, excludes provincial Crown land within woodlot licences, timber licences and federal lands.
(d) Includes Crown land within woodlot licences, farm leases, federal lands and First Nation Reserves. In 1989/90, does not include Crown land within farm leases. In 1991/92, also includes Crown land within licences to cut. In 1992/93 and 1993/94, includes provincial land within woodlot licences, timber licences and federal lands. From 1994/95, includes provincial Crown land within woodlot licences and federal lands, and from timber licences within and outside of TFLs.
(e) Includes private land within tree farm licences.
(f) Includes private land outside tree farm licences and within certified tree farms for 1983/84 to 1985/86. Includes private land outside tree farm licences for 1989/90 to 1991/92.
(g) Includes private land within woodlot licences, farm leases, licences to cut, federal lands and First Nation Reserves.
(h) Includes all Crown and private land within tree farm licences, tree farms and farm woodlot licences.
(i) Estimate only because private land owners are not required to report area harvested. Includes private land within woodlot licences.

Data source: MoF annual reports.



Area harvested (ha) on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[a]							
82/83[a]							
83/84	27 313	30 182	19 299	62 590	24 236	24 608	**188 228**
84/85	35 444	31 113	21 842	56 287	27 850	25 917	**198 453**
85/86	41 652	33 473	22 471	57 163	21 546	34 092	**210 397**
86/87	48 527	31 014	21 673	57 470	30 807	36 973	**226 464**
87/88	56 960	40 457	27 618	61 631	11 195	41 108	**238 969**
88/89	53 936	33 810	26 448	57 704	30 742	34 816	**237 456**
89/90	47 902	18 043	15 882	59 990	30 459	21 858	**194 134**
90/91	33 459	21 747	17 115	37 395	19 213	23 083	**152 012**
91/92	37 812	21 954	15 239	44 966	17 388	28 991	**166 350**
92/93	42 267	27 113	21 350	56 120	19 979	29 772	**196 601**
93/94	34 672	26 881	29 210	42 431	20 789	27 930	**181 913**
94/95	29 857	22 608	16 534	42 142	21 503	27 362	**160 006**
95/96	33 819	25 026	17 575	38 202	19 479	30 768	**164 869**
96/97	41 982	27 379	19 112	46 157	21 893	22 516	**179 039**
97/98	36 056	21 064	15 103	46 619	14 093	21 539	**154 474**

[a] Data reported as sum of Crown and private land harvested.

Data source: MoF annual reports.

Area harvested (ha) on private land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[a]							
82/83[a]							
83/84	622	1 240	3 549	2 541	1 261	10 811	**20 024**
84/85	409	1 476	3 278	633	1 604	10 564	**17 964**
85/86	383	2 885	2 309	2 641	718	12 397	**21 333**
86/87	569	724	4 923	3 281	593	3 323	**13 413**
87/88	1 879	1 483	4 178	5 024	1 026	7 423	**21 013**
88/89	1 311	3 905	7 555	8 031	2 696	9 447	**32 945**
89/90	3 566	4 049	17	5 237	3 150	8 231	**24 250**
90/91	3 121	5 940	6 843	4 662	2 565	6 388	**29 519**
91/92	1 505	4 181	5 725	7 713	1 598	5 917	**26 639**
92/93	2 583	2 318	5 297	3 603	864	10 333	**24 998**
93/94	3 283	4 230	6 304	4 489	1 228	6 301	**25 835**
94/95	3 787	4 095	8 100	6 911	900	6 445	**30 238**
95/96	2 528	3 204	5 312	5 006	750	7 940	**24 740**
96/97	2 042	2 615	4 107	2 622	592	8 012	**19 990**
97/98	1 075	2 493	4 310	2 707	746	7 996	**19 327**

[a] Data reported as sum of Crown and private land harvested.

Data source: MoF annual reports.

Area (ha) harvested on Crown and private land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	23 978	19 894	15 739	48 122	19 131	21 025	**147 889**
82/83	29 959	21 942	20 064	43 648	21 026	25 533	**162 172**
83/84	27 935	31 422	22 848	65 131	25 497	35 419	**208 252**
84/85	35 853	32 589	25 120	56 920	29 454	36 481	**216 417**
85/86	42 035	36 358	24 780	59 804	22 264	46 489	**231 730**
86/87	49 096	31 738	26 596	60 751	31 400	40 296	**239 877**
87/88	58 839	41 940	31 796	66 655	12 221	48 531	**259 982**
88/89	55 247	37 715	34 003	65 735	33 438	44 263	**270 401**
89/90	51 468	22 092	15 899	65 227	33 609	30 089	**218 384**
90/91	36 580	27 687	23 958	42 057	21 778	29 471	**181 531**
91/92	39 317	26 135	20 964	52 679	18 986	34 908	**192 989**
92/93	44 850	29 431	26 647	59 723	20 843	40 105	**221 599**
93/94	37 955	31 111	35 514	46 920	22 017	34 231	**207 748**
94/95	33 644	26 703	24 634	49 053	22 403	33 807	**190 244**
95/96	36 347	28 230	22 887	43 208	20 229	38 708	**189 608**
96/97	44 024	29 994	23 219	48 779	22 485	30 528	**199 029**
97/98	37 131	23 557	19 413	49 326	14 839	29 535	**173 801**

Data source: MoF annual reports.

Area (ha) harvested by harvest type from 81/82 to 97/98, by region

Year	Type of harvest	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS	Yearly total
81/82	Clearcut[a]	16 014	14 041	8 826	47 954	17 635	20 678	**125 148**	
	Selective cut[b]	7 964	5 853	6 913	168	1 496	347	**22 741**	**147 889**
82/83	Clearcut	18 274	15 904	11 678	43 486	20 190	24 898	**134 430**	
	Selective cut	11 685	6 038	8 386	162	836	635	**27 742**	**162 172**
83/84	Clearcut	20 967	22 599	15 497	64 952	24 973	34 682	**183 670**	
	Selective cut	6 968	8 823	7 351	179	524	737	**24 582**	**208 252**
84/85	Clearcut	24 761	24 785	16 835	56 803	28 531	35 308	**187 023**	
	Selective cut	11 092	7 804	8 285	117	923	1 173	**29 394**	**216 417**
85/86	Clearcut	32 140	28 029	18 033	59 770	22 012	44 520	**204 504**	
	Selective cut	9 895	8 329	6 747	34	252	1 969	**27 226**	**231 730**
86/87	Clearcut	39 196	23 857	20 697	60 612	31 123	39 045	**214 530**	
	Selective cut	9 900	7 881	5 899	139	277	1 251	**25 347**	**239 877**
87/88	Clearcut	51 340	32 808	23 365	66 625	11 586	46 978	**232 702**	
	Selective cut	7 499	9 132	8 431	30	635	1 553	**27 280**	**259 982**
88/89	Clearcut	49 389	30 496	25 632	65 718	33 338	42 303	**246 876**	
	Selective cut	5 858	7 219	8 371	17	100	1 960	**23 525**	**270 401**
89/90	Clearcut	45 792	16 708	9 842	65 015	32 229	29 661	**199 247**	
	Selective cut	5 676	5 384	6 057	212	1 380	428	**19 137**	**218 384**
90/91	Clearcut	34 543	24 036	16 191	41 199	21 777	28 799	**166 545**	
	Selective cut	2 037	3 651	7 767	858	1	672	**14 986**	**181 531**
91/92	Clearcut	34 838	20 105	14 118	51 464	18 937	34 803	**174 265**	
	Selective cut	4 479	6 030	6 846	1 215	49	105	**18 724**	**192 989**
92/93	Clearcut	34 232	21 920	15 896	58 950	20 503	39 123	**190 624**	
	Selective cut	10 618	7 511	10 751	773	340	982	**30 975**	**221 599**
93/94	Clearcut	32 238	21 825	23 902	45 682	21 548	32 734	**177 929**	
	Selective cut	5 717	9 286	11 612	1 238	469	1 497	**29 819**	**207 748**
94/95	Clearcut	29 506	20 919	14 824	47 811	21 870	32 634	**167 564**	
	Selective cut	4 138	5 784	9 810	1 242	533	1 173	**22 680**	**190 244**
95/96[c]	Clearcut	34 046	22 410	14 470	42 543	20 148	33 400	**167 017**	
	Selective cut	2 301	5 820	8 416	665	81	5 308	**22 591**	**189 608**
96/97[c]	Clearcut	42 379	21 110	16 708	47 564	21 889	29 148	**178 796**	
	Selective cut	1 644	8 884	6 511	1 215	596	1 381	**20 233**	**199 029**
97/98	Clearcut	34 199	18 837	13 644	48 288	14 111	28 265	**157 344**	
	Selective cut	2 932	4 720	5 769	1 038	728	1 270	**16 457**	**173 801**

[a] "Clearcutting" means the sum of "conventional clearcutting," "clearcutting with green tree retention patches" and "clearcut with reserves" harvesting methods.

[b] "Selective cut" means the sum of "seed tree," "shelterwood," "selection," "patch cutting" and "coppice silviculture systems" plus "commercial thinning," "intermediate cutting" and "diameter limit" and "salvage" harvesting operations.

[c] Numbers have been updated and revised from published annual reports.

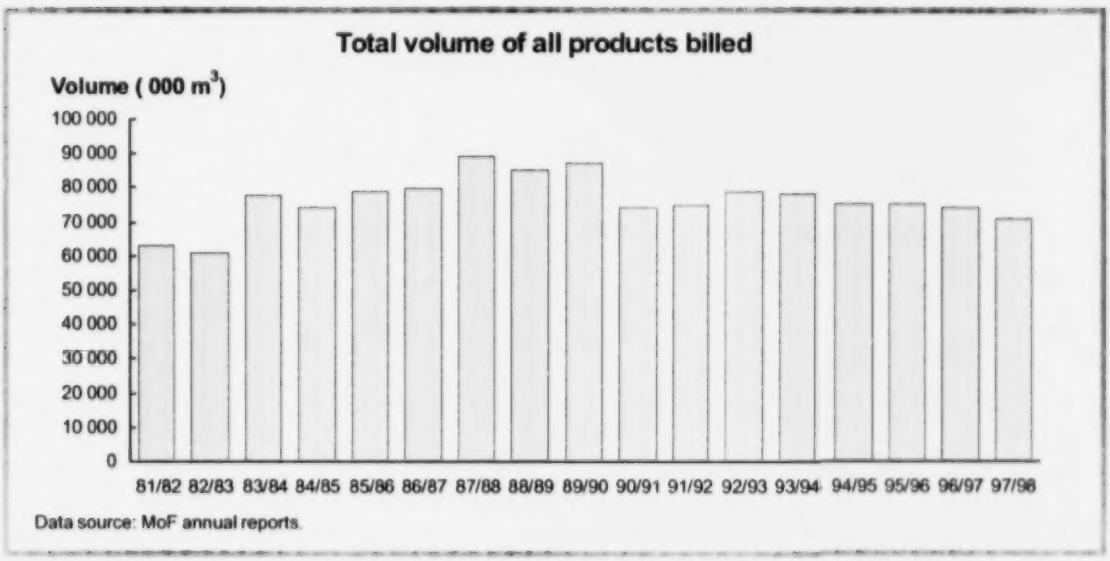
Data source: MoF annual reports.

Volume ('000 m^3) of all products billed[a,b] from 81/82 to 97/98 on Crown and private land, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	6 518	9 592	5 465	12 608	10 351	18 091	**62 625**
82/83	7 283	7 282	5 649	14 124	7 978	18 626	**60 942**
83/84	7 566	9 131	6 993	17 669	11 271	25 078	**77 708**
84/85	7 710	8 210	6 629	17 261	11 615	23 046	**74 471**
85/86	8 496	9 665	6 711	17 020	9 305	27 684	**78 881**
86/87	9 875	8 730	6 595	17 059	10 206	27 443	**79 908**
87/88	10 071	9 984	7 260	18 308	9 789	33 640	**89 052**
88/89	9 655	9 582	8 368	16 723	11 435	29 426	**85 189**
89/90	9 647	9 797	8 186	19 269	11 054	28 982	**86 935**
90/91	8 159	8 238	6 771	16 862	9 818	24 456	**74 304**
91/92	9 065	9 306	6 301	16 752	9 101	24 396	**74 921**
92/93	8 839	9 237	7 538	19 126	9 438	24 592	**78 770**
93/94	8 146	9 481	7 333	18 339	9 760	24 955	**78 014**
94/95	8 526	9 043	6 488	18 151	9 677	23 441	**75 237**
95/96	8 232	9 301	6 284	17 590	9 443	24 559	**75 408**
96/97	8 958	8 768	6 374	18 409	8 529	22 973	**74 011**
97/98	8 346	8 540	6 275	17 731	8 007	21 814	**70 713**

(a) For all forest land (Crown, private, federal, and First Nation reserves).
(b) Includes firmwood rejects.

Data source: MoF annual reports.



Forest revenue ('000 $)[a,b] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	Victoria	TOTALS
81/82[c]	9 152	7 783	4 715	13 933	16 453	50 971	5 278	**108 285**
82/83[d]	4 492	3 623	3 114	12 660	13 848	44 128	6 756	**88 621**
83/84[d]	8 700	10 574	6 943	12 889	18 489	74 508	6 336	**138 439**
84/85	12 036	16 024	10 764	29 474	31 630	87 383	1 191	**188 502**
85/86	13 882	19 872	12 913	30 684	27 736	103 995	1 178	**210 260**
86/87	16 700	17 887	11 329	48 419	23 993	127 879	1 186	**247 393**
87/88	37 159	44 367	28 587	110 350	58 441	257 147	1 570	**537 621**
88/89	46 258	66 949	40 777	171 620	63 259	231 722	3 057	**623 642**
89/90	60 774	53 197	42 376	175 753	72 853	244 536	2 102	**651 591**
90/91[e]	50 229	51 177	30 914	145 945	71 959	214 205	8 740	**573 169**
91/92[f]	58 544	70 101	30 554	154 476	58 851	226 979	8 413	**607 918**
92/93	78 555	84 956	38 739[g]	189 385	74 954	242 174	2 428	**672 452**
93/94	110 928	123 559	57 000[g]	318 730	112 358	294 000	8 426	**968 001**
94/95[h]	235 719	221 419	97 055	591 811	235 584	499 108	3 767	**1 884 463**
95/96[h]	188 404	205 700	90 294	462 208	195 994	519 200	3 714	**1 665 513**
96/97[h]	246 140	230 744	112 021	561 572	206 664	493 598	1 237	**1 851 978**
97/98[h]	223 489	226 838	96 039	590 999	202 396	454 960	2 190	**1 796 912**

(a) Forest Revenue is a varied cumulation of stumpage, rents and fees, Small Business Forest Enterprise Program (87/88 to current), timber royalties (up to 94/95), export fees, scaling fees (up to 94/95), range fees, interest, and miscellaneous/other. Forest revenue from 1981/82 through 1983/84 is reported net of Section 88 credits against stumpage while revenue from 1984/85 through 1987/88 is reported before deduction of credits.

(b) All stumpage data are based on an modified or full accrual accounting system. Stumpage equals 96% of total revenue.

(c) Includes forest revenue from forest protection agreements, recoveries of $3.5 million from the B.C.–Canada Subsidiary Agreement on Intensive Forest Management and other miscellaneous expenses.

(d) Includes forest revenue from forest protection agreements, recoveries of $5.0 million from B.C.–Canada Subsidiary Agreement on Intensive Forest Management and other miscellaneous expenses.

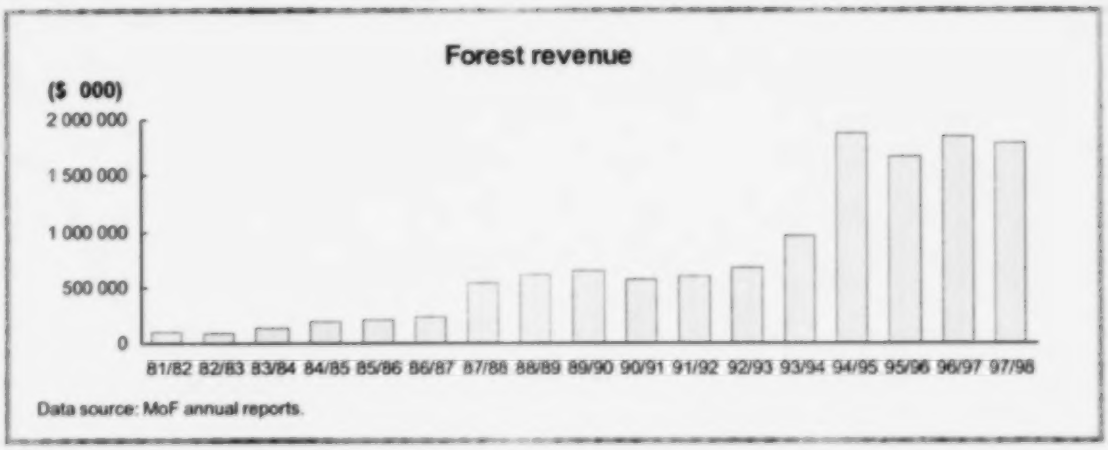
(e) Victoria had interest adjustments for the year due to a reversal related to prior fiscal year. Victoria includes $7.0 million in seedling sales under the Sustainable Environment Fund.

(f) Victoria includes $6.5 million for "seedling trades" to the Sustainable Environment Fund of which $4.1 million was transferred from the Small Business Forest Enterprise Program. Nelson includes $0.1 million from Downie Street Sawmills to the Forest Stand Management Fund. Cariboo includes a charge of $0.1 million, which should have been to stumpage.

(g) Miscellaneous revenue in the Nelson Forest Region includes $0.2 million from Downie St. Sawmills to the Forest Stand Management Fund.

(h) Royalties were changed to stumpage and scaling fees were eliminated on May 1, 1994 as part of the increased stumpage rate structure. Stumpage revenue includes funds that are transferred to Forest Renewal BC under the BC Forest Renewal Act.

Data source: MoF annual reports.



Data source: MoF annual reports.

Average cutblock size (ha)[a] on Crown land from 1988 to 1998, by region

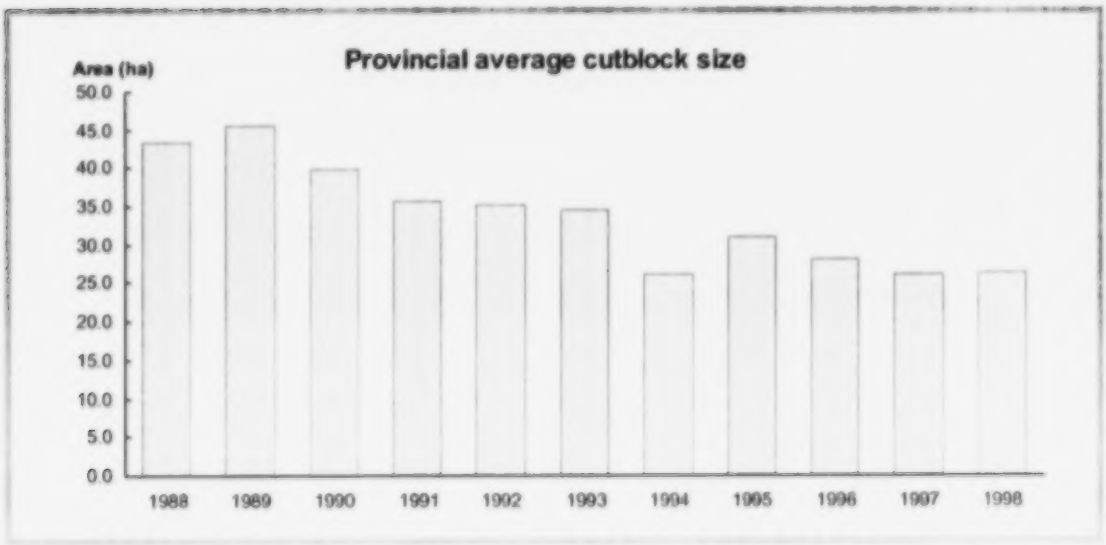
Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	Provincial
1988	64.5	26.1	29.8	70.6	49.1	33.4	**43.4**
1989	84.4	27.4	26.9	60.6	51.7	39.0	**45.5**
1990	59.9	28.2	26.9	47.8	50.4	34.1	**39.9**
1991	44.6	24.6	21.4	49.2	39.2	36.6	**35.7**
1992	42.5	22.2	22.0	57.4	39.3	31.4	**35.3**
1993	41.2	22.7	18.9	56.9	39.3	30.8	**34.6**
1994	33.9	18.0	15.7	50.4	28.3	17.3	**26.3**
1995	43.4	21.3	19.7	44.4	31.9	29.0	**31.1**
1996	37.8	18.9	17.4	42.6	28.8	22.0	**28.3**
1997	34.2	16.9	18.5	38.5	30.0	19.9	**26.2**
1998	31.4	17.7	20.1	40.3	29.1	19.4	**26.4**

[a] Includes all major and small business cutblocks; major licence areas include the following: forest licences, tree farm licences, timber sales licences (TSLs) majors with and without AAC (allowable annual cut), woodlot licences, timber licences, timber licences with no cutting permits, export Crown grant and non-exportable Crown grant.

Data source: For the years 1988 to 1994, one-time report of September 23, 1994; data is based on major licensee silviculture information systems and integrated silviculture information systems, Ministry of Forests. For 1995, one-time report of March 28, 1996; data is based on major licensee silviculture information systems and integrated silviculture information systems, Ministry of Forests. For the years 1996 to 1998, based on one-time report of July 27, 1999.

DID YOU KNOW...

Average cutblock size is decreasing; provincial average cutblock size has decreased almost 40% since 1988.



SILVICULTURE

CONTENTS

2 Silviculture

2.1 Regeneration 24

2.1.1 Surveys 24

Surveys on Crown land from 81/82 to 97/98, by region 24
Total area surveyed (chart) 24
Not satisfactorily restocked Crown land from 88/89 to 97/98 25

2.1.2 Site Preparation 26

Site preparation on Crown land by all methods from 81/82 to 97/98, by region 27
Crown land site prepared 1981/82 to 1997/98 (chart) 27
Site preparation on Crown land by burning methods from 81/82 to 97/98, by region 28
Site preparation on Crown land by mechanical methods from 81/82 to 97/98, by region 28
Site preparation on Crown land by chemical methods from 81/82 to 97/98, by region 29
Site preparation on Crown land by other methods from 81/82 to 97/98, by region 30

2.1.3 Planting 31

Area planted on Crown land from 81/82 to 97/98, by region 32
Total area planted – Crown and private land (chart) 32
Area planted from 81/82 to 97/98 in B.C., by responsibility 33
Regeneration method on harvested areas (chart) 34
Cumulative trees planted (chart) 35
Trees planted from 81/82 to 97/98 in B.C., by responsibility 36
Trees planted from 81/82 to 97/98 on Crown land, by region 37
Trees planted on Crown land (chart) 37
Trees planted on Crown land from 84/85 to 97/98, by species 39
Summary of stock type changes (chart) 41
Tree species diversity in B.C. (chart) 43

2.1.4 Brushing 44

Brushing on Crown land from 81/82 to 97/98, by region 44
Total brushing on Crown land (chart) 44
Manual brushing on Crown land from 81/82 to 97/98, by region 45
Chemical brushing on Crown land from 81/82 to 97/98, by region 45
Manual versus chemical brushing on Crown land (chart) 46

2.2 Stand Tending 47

2.2.1 Spacing 47

Spacing on Crown land from 81/82 to 97/98, by region 47
Total spacing on Crown land (chart) 48

2.2.2 Fertilization 48

Fertilization on Crown land from 81/82 to 97/98, by region 48
Fertilization on Crown land (chart) 49

2.2.3 Pruning 50

Pruning on Crown land from 81/82 to 97/98, by region 50

2.3 Forest Health 52

Total area affected, by region (bark beetles + defoliators) 52
Area affected by bark beetles from 81/82 to 98/99, by region 53
Area affected by insect defoliators from 81/82 to 98/99, by region 54
Timber damaged by forest pests from 81/82 to 98/99, by region 55
Timber damaged by forest pests (chart) 55
Area burned by wildfires from 81/82 to 97/98, by region 56
Timber burned by wildfires from 81/82 to 97/98, by region 57
Weed control on Crown range land from 81/82 to 97/98, by region 58

2.4 Expenditures 59

Silviculture expenditures under all ministry-funded programs from 81/82 to 97/98, by region 59
Silviculture expenditures under all ministry-funded programs (chart) 60
Average cost of silviculture treatments on Crown land in 97/98, by region 61
Average cost of basic surveys from 81/82 to 97/98, by region 62
Average cost of site preparation from 81/82 to 97/98, by region 63
Average cost of planting from 81/82 to 97/98, by region 64
Average cost of manual brushing from 81/82 to 97/98, by region 65
Average cost of chemical brushing from 81/82 to 97/98, by region 66
Average cost of spacing from 81/82 to 90/91, by region 66

Average cost of basic spacing from 91/92 to 97/98, by region 67
Average cost of incremental spacing from 91/92 to 97/98, by region 67
Average cost of pruning from 81/82 to 97/98, by region 68
Average cost of fertilization from 81/82 to 97/98, by region 69
Average cost of incremental surveys from 81/82 to 97/98, by region 70
Average cost of weed control on Crown range land from 81/82 to 97/98, by region 71

2 SILVICULTURE

DID YOU KNOW...

Silviculture surveys on Crown land have more than tripled since 1981/82 to meet the need for proper planning and monitoring of silviculture activities.

2.1 Regeneration

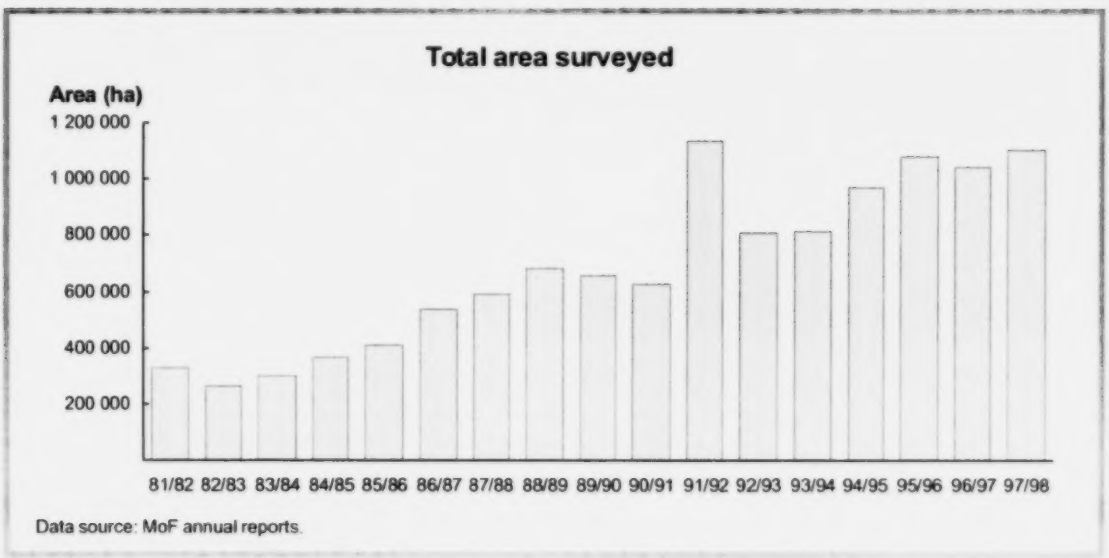
2.1.1 Surveys

Surveys[a] (ha) on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	78 750	51 715	41 433	53 375	40 708	68 603	**334 584**
82/83	41 227	35 952	31 802	53 941	22 770	81 131	**266 823**
83/84	41 484	42 106	35 528	71 460	34 212	75 677	**300 467**
84/85	46 052	52 029	59 401	91 328	29 333	87 534	**365 677**
85/86	51 207	64 851	48 834	125 603	52 524	69 929	**412 948**
86/87	46 582	72 016	96 704	129 423	78 121	112 221	**535 067**
87/88	77 328	105 035	90 400	135 551	87 690	93 806	**589 810**
88/89	91 466	116 696	100 844	168 057	125 953	79 576	**682 592**
89/90	116 324	120 353	121 346	126 442	76 150	94 994	**655 609**
90/91	98 465	103 470	127 429	109 873	83 086	104 822	**627 145**
91/92	122 794	147 542	141 302	441 701	147 372	134 328	**1 135 039**
92/93	134 128	146 461	126 692	181 916	103 847	117 538	**810 582**
93/94	150 599	162 030	118 780	181 790	93 905	105 286	**812 390**
94/95	146 174	182 864	133 995	250 573	107 004	151 004	**971 614**
95/96	170 184	213 161	152 578	261 137	113 981	166 496	**1 077 536**
96/97	184 173	198 626	124 390	262 500	105 245	169 140	**1 044 074**
97/98	173 822	200 724	129 723	275 675	135 621	188 826	**1 104 391**

[a] Includes surveys for site preparation, plantability, stocking, survival, stand tending and free growing. Does not include aerial surveys.

Data source: MoF annual reports.



Data source: MoF annual reports.

Not satisfactorily restocked (NSR) Crown land (ha)[a] from 88/89 to 97/98

	Obligation category[b]						
Year	Ministry pre '82 good+med	Ministry pre '82 poor+low	Ministry 82–87 (all sites)	Ministry post '87 (all sites)	SBFEP post '88 (all sites)[c]	Major licences post '87 (all sites)[c]	Total NSR all categories (all sites)
88/89	553 145	305 423	990 347		28 015	95 221	**1 972 151**
89/90	436 691	310 293	875 178		47 774	192 917	**1 862 853**
90/91	458 338	260 779	766 578		101 947	381 222	**1 968 864**
91/92	326 611	181 164	417 436	45 232	62 117	496 920	**1 529 480**
92/93	272 975	128 402	292 086	45 904	75 582	547 458	**1 362 408**
93/94	237 996	106 020	269 435	30 295	83 664	562 823	**1 290 233**
94/95	204 222	82 880	194 435	25 748	75 654	467 672	**1 050 611**
95/96	182 611	79 347	143 515	23 928	61 538	466 049	**956 988**
96/97	211 555[d]		110 742	26 140	45 918	433 583	**827 938**
97/98	182 474[d,e]		101 987[e]	25 018	38 059	404 994	**752 532**

(a) This table reports the NSR as of March 31 of each year and does not include the approximate 2 million hectares of pre-1982 not-stocked land that is on the Inventory Branch database. Much of the timber on 2 million hectares is still classified as non-commercial, even though natural regeneration is in progress on many of the sites.

(b) Key to obligation category, based on the responsiblity for reforestation to the free growing stage.

Pre '82, good and medium sites	A large portion of this obligation category was treated under FRDA I, from 1985–1990, and the Forest Renewal Initiatives Program for 90/91.
Pre '82, poor and low sites	Poor and low NSR sites created prior to 1982 are given low priority for funding.
1982–87, all sites	This includes area under the (then named) Small Business Forest Enterprise Program (SBFEP) (cut prior to January 1, 1988), and areas of major licensees (cut prior to October 1, 1987), together with ministry pre '82 good and medium sites are considered "outstanding obligations."
Post '87, all sites	The ministry remains responsible for basic silviculture on all areas denuded by fire or pests.
SBFEP	Basic silviculture on areas denuded after January 1, 1988 is funded by SBFEP account and implemented by the ministry.
Major licensees post '87, all sites	Basic silviculture on all areas harvested after October 1, 1987 is funded by major licensees. Licensees have 6 to 7 years to reach the basic silviculture requirement through natural regeneration or 3 to 4 years through planting, as specified in the silviculture prescription for each area.

(c) Stocking is in progress on these areas and is within allowable regeneration periods.

(d) Site class not used when reporting pre '82 NSR Crown land.

(e) These areas are considered 'outstanding obligations' as of August 1996, for treatment under the Backlog Reforestation Program funded by Forest Renewal BC.

Data source: MoF annual reports.

DID YOU KNOW...

NSR on Crown land has decreased by over 1.2 million hectares from 1988/89 when the first 'net change' analysis of NSR on managed forest land was produced for an annual report.

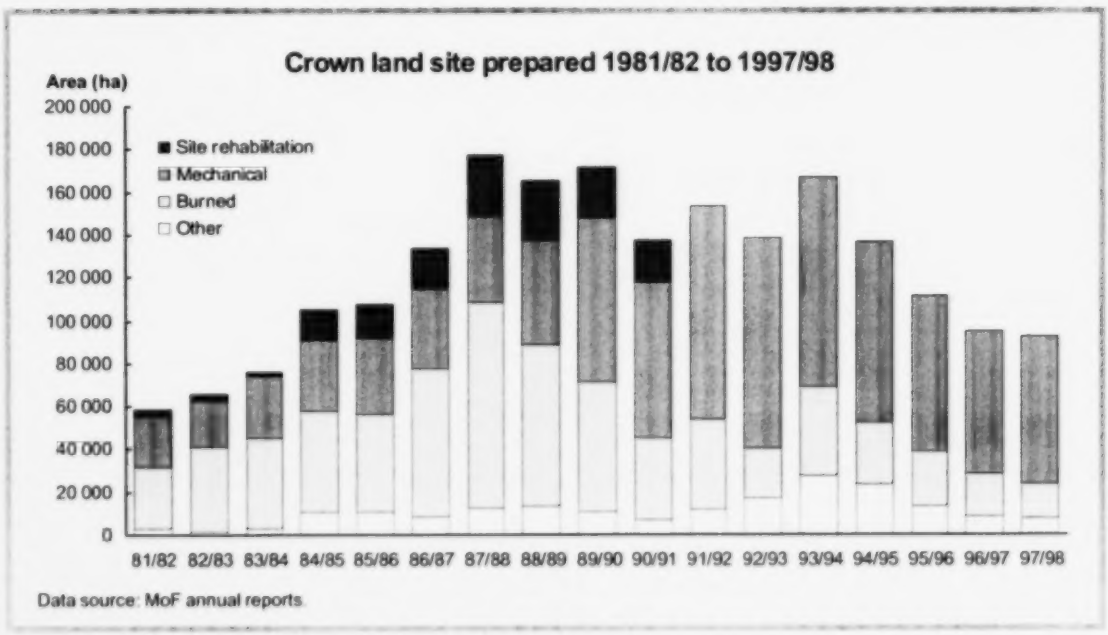
DID YOU KNOW...

In 1997/98 site preparation was carried out on 92 916 hectares, for an increase of more than 67% since 1981/82.

Site preparation (ha) on Crown land by all methods from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	5 892	8 642	4 300	26 559	7 517	2 661	**55 571**
82/83	5 979	8 975	7 593	28 736	8 004	3 374	**62 661**
83/84	5 405	13 470	9 309	26 937	10 207	8 981	**74 309**
84/85	10 246	13 643	9 113	37 752	11 310	8 963	**91 027**
85/86	7 276	8 227	6 532	46 753	13 413	9 220	**91 421**
86/87	19 800	20 240	12 948	44 467	8 435	8 486	**114 376**
87/88	23 422	21 337	14 129	65 762	14 632	9 300	**148 582**
88/89	21 875	30 814	16 074	44 823	19 538	4 794	**137 918**
89/90	23 653	28 539	16 926	54 485	20 077	4 213	**147 893**
90/91	25 266	22 180	11 245	42 126	13 736	3 138	**117 691**
91/92	33 343	30 274	12 637	57 309	14 681	5 155	**153 399**
92/93	28 921	25 535	12 709	54 063	11 800	5 410	**138 438**
93/94	40 474	30 670	13 241	60 535	15 050	6 438	**166 408**
94/95	37 167	33 712	9 299	43 321	10 565	4 434	**138 498**
95/96	27 926	26 359	8 344	36 387	10 297	2 904	**112 218**
96/97	24 313	24 497	7 302	29 442	9 144	3 059	**97 757**
97/98	26 119	22 072	7 857	26 922	7 744	2 202	**92 916**

Data source: MoF annual reports.



Site preparation (ha) on Crown land by burning methods from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	5 153	3 623	1 180	13 076	3 805	1 868	**28 705**
82/83	4 441	4 721	5 077	16 869	4 719	3 335	**39 162**
83/84	4 329	9 666	4 483	10 024	6 140	7 506	**42 148**
84/85	5 592	6 938	6 352	15 391	5 306	6 970	**46 549**
85/86	1 776	3 347	3 426	23 843	8 738	3 809	**44 939**
86/87	11 660	12 678	8 770	24 087	5 032	5 997	**68 224**
87/88	11 557	9 888	9 578	47 928	10 364	6 168	**95 483**
88/89	13 305	14 143	8 804	20 981	13 304	3 978	**74 515**
89/90	6 868	11 528	6 108	22 291	11 070	2 243	**60 108**
90/91	6 817	6 077	2 876	14 930	5 254	1 818	**37 772**
91/92	7 963	7 195	4 371	13 212	5 582	3 313	**41 636**
92/93	6 783	3 777	2 764	7 000	1 014	2 361	**23 699**
93/94	6 827	5 001	4 715	19 340	3 167	2 244	**41 294**
94/95	4 393	5 601	3 128	10 995	2 285	1 936	**28 338**
95/96	5 044	5 765	3 212	9 220	1 585	933	**25 758**
96/97	2 463	5 902	2 545	5 295	2 339	1 125	**19 669**
97/98[a]	1 559	3 141	2 480	5 760	1 841	809	**15 590**

[a] May include broadcast burn, landing burn, pile and burn, spot burn, wildfire or windrow.

Data source: MoF annual reports.

Site preparation (ha) on Crown land by mechanical methods from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	683	5 019	2 837	12 304	2 675	202	**23 720**
82/83	1 476	3 394	2 278	11 477	3 265	36	**21 926**
83/84	1 048	3 406	4 553	16 041	3 822	363	**29 233**
84/85	2 881	4 715	1 920	17 639	5 817	322	**33 294**
85/86	5 462	4 269	2 837	18 136	4 523	377	**35 604**
86/87	7 850	6 442	3 679	15 885	2 811	586	**37 253**
87/88	9 236	6 023	3 924	16 448	3 857	1 135	**40 623**
88/89	6 670	10 068	5 976	20 931	5 644	370	**49 659**
89/90	14 391	14 600	10 499	28 489	8 593	449	**77 021**
90/91	15 276	15 299	8 285	25 091	8 122	742	**72 815**
91/92	22 733	21 712	6 677	40 297	8 055	404	**99 878**
92/93	15 707	19 940	7 488	44 480	8 894	1 230	**97 739**
93/94	16 766	24 366	5 616	38 885	9 773	2 356	**97 762**
94/95	19 906	21 368	4 404	29 666	7 644	1 558	**84 546**
95/96	17 944	19 066	4 280	22 698	7 172	1 099	**72 259**
96/97	17 282	16 652	3 335	22 252	6 370	402	**66 293**
97/98	19 490	18 474	4 651	20 379	5 294	519	**68 807**

Data source: MoF annual reports.

Site preparation (ha) on Crown land by chemical methods[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82			9				9
82/83							
83/84				9	142	153	304
84/85			159	354	48	170	731
85/86			98	4 590	122	340	5 150
86/87	50	35	251	4 347		396	5 079
87/88	4	2 719	240	985	275	276	4 499
88/89		3 793	650	1 916	461	368	7 188
89/90	803	411	75	3 705	226	980	6 200
90/91	409	220	6	2 024	9	514	3 182
91/92	363		946	2 677	6	1 088	5 080
92/93	1 151	107	1 202	2 334	15	1 683	6 492
93/94[b]	1 828	32	1 234	1 617		1 500	6 211
94/95[b]	735	135	292	157		358	1 677
95/96[b]	632	152	23	202		118	1 127
96/97[b]	455		76	58		27	616
97/98[b]		10	52	167		11	240

[a] Spot and broadcast methods.
[b] Air and ground treatments.

Data source: MoF annual reports.

DID YOU KNOW...

In 1987/88, more than 60% of all site preparation was by burning methods. In 1997/98, 74% of all site preparation was by mechanical methods.

Site preparation (ha) on Crown land by other methods from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[a]	56		274	1 179	1 037	591	**3 137**
82/83[a]	62	860	238	390	20	3	**1 573**
83/84[a]	28	398	273	863	103	959	**2 624**
84/85[a]	1 773	1 990	682	4 368	139	1 501	**10 453**
85/86[a]	38	611	171	184	30	4 694	**5 728**
86/87[a]	240	1 085	248	148	592	1 507	**3 820**
87/88[b]	2 625	2 707	387	401	136	1 721	**7 977**
88/89[b]	1 900	2 810	644	995	129	78	**6 556**
89/90[b]	1 591	2 000	244		188	541	**4 564**
90/91[b]	2 764	584	78	81	351	64	**3 922**
91/92[c]	2 284	1 367	643	1 123	1 038	350	**6 805**
92/93[b,c]	5 280	1 711	1 255	249	1 877	136	**10 508**
93/94[c,d]	15 053	1 272	1 676	692	2 109	338	**21 140**
94/95[c,d]	12 134	5 707	1 475	2 503	636	582	**23 037**
95/96[c,d]	4 306	1 376[e]	830	4 267	1 540	721[e]	**13 077**
96/97[c,f]	4 048	1 749	1 100	338	416	1 290	**8 941**
97/98[c,f]	5 070	447	674	616[e]	609	863	**8 279**

[a] Includes residual falling and snag falling and other methods.
[b] Includes cable or machine knockdown of trees higher than three metres from 87/88 to 90/91 and in 92/93 and mistletoe control from 87/88 to 90/91.
[c] Includes grass seeding of roads, landings and cutblocks.
[d] May include sheep or cattle grazing, fireguarding, hand site preparation, manual power saw operation, snag falling or 3-m falldown.
[e] Includes unspecified site preparation activities.
[f] May include fire guarding, hand site preparation, manual power saw operation, snag falling or 3-m knockdown.

Data source: MoF annual reports.

2.1.3 Planting

DID YOU KNOW...

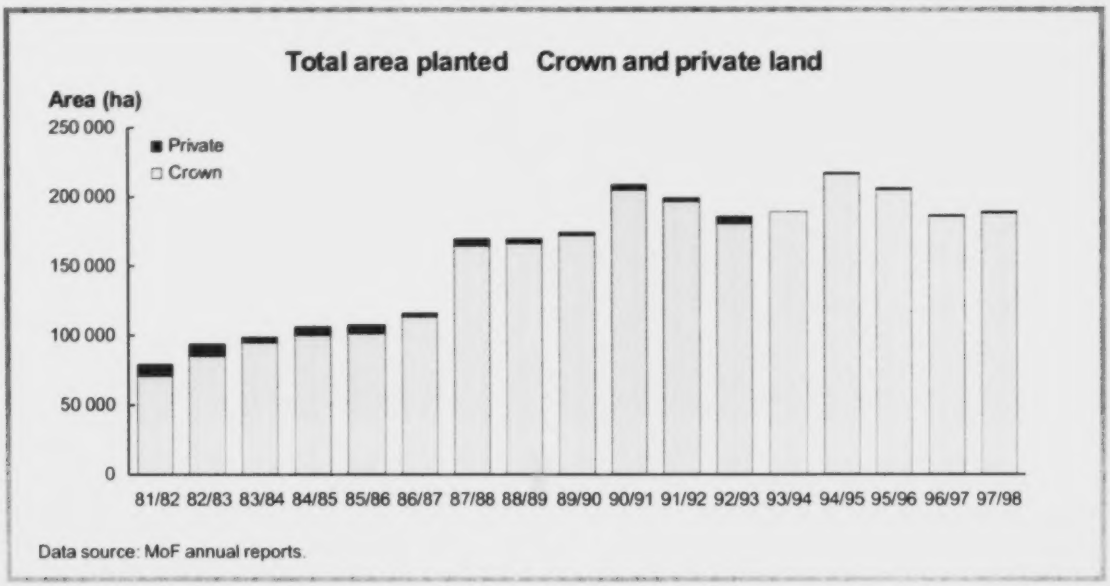
In 1997/98, the area planted was double the area planted in 1981/82.

Area (ha) planted[a] on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	7 514	9 984	6 103	20 805	8 787	16 986	**70 179**
82/83	7 419	15 073	6 132	20 837	13 225	22 907	**85 593**
83/84	5 483	15 336	5 352	29 257	14 912	24 388	**94 728**
84/85	7 517	13 167	7 276	32 932	19 609	19 535	**100 036**
85/86	7 381	15 363	7 188	32 581	18 166	20 763	**101 442**
86/87	10 507	18 223	12 966	37 669	14 871	18 655	**112 891**
87/88	15 865	18 552	18 513	53 219	28 475	29 419	**164 043**
88/89	13 327	22 628	20 694	60 071	28 775	19 876	**165 371**
89/90	16 014	21 265	21 291	57 308	30 544	25 665	**172 087**
90/91	19 112	28 669	24 913	67 879	35 231	28 472	**204 276**
91/92	19 359	29 296	19 306	62 928	33 830	31 324	**196 043**
92/93	17 990	30 426	17 600	62 346	27 215	25 015	**180 592**
93/94	17 897	30 163	16 104	71 496	28 410	24 624	**188 694**
94/95	26 160	35 868	18 725	72 576	25 442	37 252	**216 023**
95/96[b]	27 767	31 170	21 812	62 451	30 127	31 272	**204 598**
96/97[b]	22 202	29 675	21 042	63 609	22 734	29 046	**188 308**
97/98[c]	26 853	28 469	16 987	65 231	22 618	27 229	**187 387**

[a] Basic silviculture obligation and backlog planting combined.
[b] Planting does not include fill-planting or replanting areas.
[c] Planting includes fill-planted or replanted areas. Fill-planted and replanted areas totalled 34 930 hectares in 1997/98.

Data source: MoF annual reports.



Area planted (ha) from 81/82 to 97/98 in B.C., by responsibility

	Crown land					Private land					
			TSA[a]			Managed forest					
Year	TFL[b]	Woodlot licence	Licensee[c]	Ministry[d]	Subtotal	TFL[e]	TF[f]	Land units[g]	Other[h]	Subtotals	TOTALS
81/82					70 179					9 014	**79 193**
82/83					85 593					8 006	**93 599**
83/84					94 728					4 415	**99 143**
84/85	16 467		61 652	21 916	100 035	1 221	4 217		69	5 507	**105 542**
85/86	19 184		59 533	22 725	101 442	841	4 028		498	5 367	**106 809**
86/87	17 173		63 500	32 218	112 891	783	1 817		248	2 847	**115 738**
87/88	24 880		92 829	46 335	164 044	1 072		3 426	460	4 958	**169 002**
88/89	21 786		89 700	53 885	165 371	1 088		3 013	13	4 114	**169 485**
89/90	21 010		96 188	54 889	172 087	191		1 899	133	2 223	**174 310**
90/91	26 125		123 081	55 070	204 276	1 096		3 414	49	4 559	**208 835**
91/92	30 737		82 282	83 024	196 043	534		2 693		3 227	**199 270**
92/93	26 395	140	90 704	63 353	180 592	373		3 160	698	4 231	**184 823**
93/94	23 537	425	97 695	67 038	188 695	829		33		862	**189 557**
94/95	32 085	947	119 354	63 637	216 023	398		165		563	**216 586**
95/96	33 740	706	125 648	44 506	204 599	842		933	7	1 782	**206 380**
96/97	29 477	389	126 667	28 945	185 478	957			35	992	**186 470**
97/98	27 443	594	127 540	31 811	187 388	1 033		38		1 071	**188 458**

(a) Includes Crown land within timber supply areas, excluding tree farm licences, woodlot licences, farm leases, federal lands, and First Nation reserves.

(b) Includes Crown land within tree farm licences. For years 84/85 to 87/88, planting is funded by the ministry through credits against stumpage payable. On areas harvested after October 1, 1987, planting is paid for by licensees. On areas denuded prior to October 1, 1987, planting is funded by the ministry, but implemented by the licensee in the years from 1988/89 to 1996/97. In 1997/98, planting is funded by Forest Renewal BC but implemented by the licensee.

(c) Includes Crown land within timber supply areas. For years 85/86 to 87/88, planting is funded by the ministry through credits against stumpage payable. Planting for years 88/89 to 97/98 (all areas harvested after October 1, 1987), is paid for by the licensee. For all areas denuded prior to October 1, 1987, planting is funded by the ministry, but is implemented by the licensee.

(d) For 84/85, planting was funded and was the responsibility of the ministry. From 85/86 to 87/88, planting was funded by the ministry and FRDA I and was a ministry responsibility. From 88/89 to 97/98, for areas denuded after January 1, 1988 under the Small Business Forest Enterprise Program, planting was funded through the Small Business Forest Enterprise Account. From 92/93 to 97/98, the ministry implemented planting. For areas denuded prior to January 1, 1988, planting was funded by the ministry (from 88/89 to 91/92) and the Forest Resources Development Agreement (88/89 to 90/91) and the Forest Renewal Initiatives Sub-Program (90/91). Planting was the ministry's responsibility in 90/91 and 91/92. From 92/93 to 96/97, for areas denuded under the Small Business Enterprise Program prior to January 1, 1988, planting was funded and implemented by the ministry. On areas denuded prior to October 1, 1987, planting was funded by the ministry and implemented by the licensee. In 97/98, for areas denuded prior to October 1, 1987, planting was funded by Forest Renewal BC and implemented by the ministry and industry.

(e) Includes private land within tree farm licences.

(f) Includes private land within certified tree farms, but outside tree farm licences.

(g) Includes private land within managed forest land units, but outside tree farm licences.

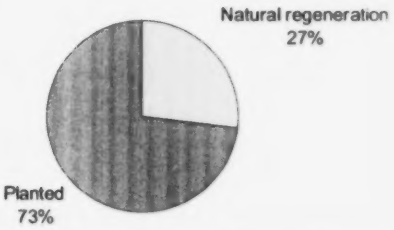
(h) Includes private land outside tree farm licences and managed forest land units.

Data source: MoF annual reports.

DID YOU KNOW...

In 1997/98, 94% of planting on Crown land was carried out as part of basic silviculture obligations of major licence holders and the SBFEP.

Regeneration method on harvested areas



The current proportion of area prescribed for natural regeneration in B.C. has dropped from about 50% six years ago, to levels of 27% in 1996.

Data source: Forest Practices Branch, 1996.

DID YOU KNOW...

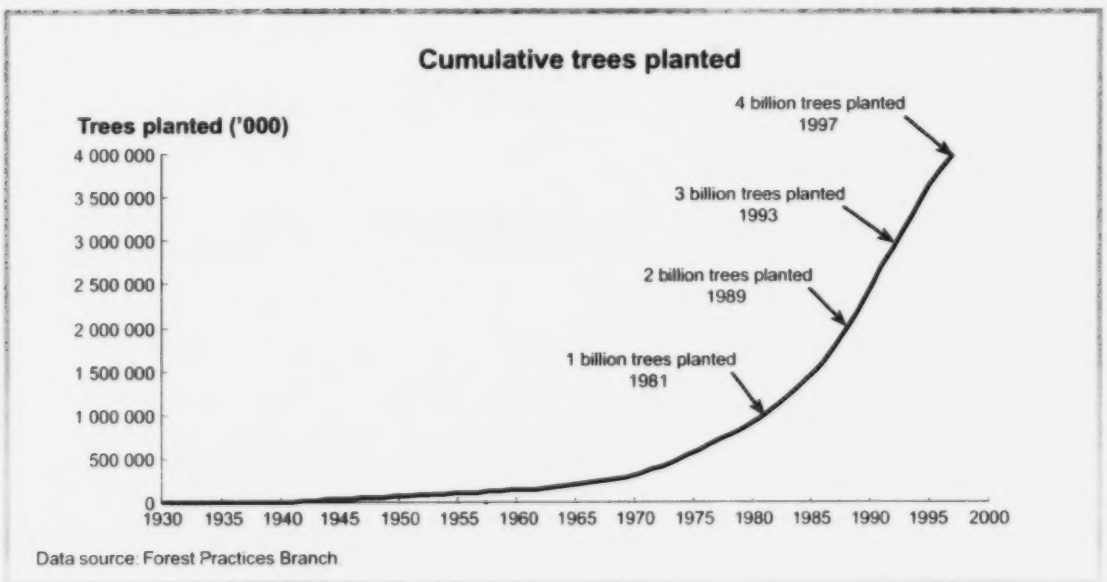
An average of 2 to 3 tree species is planted on each site.

DID YOU KNOW...

The number of trees planted on Crown land tripled between 1981/82 and 1997/98.

DID YOU KNOW...

The first reforestation seedling was planted in 1930.
The one millionth seedling was planted in 1938.
The 100 millionth seedling was planted in 1954.
The one billionth seedling was planted in 1981.
The two billionth seedling was planted in 1989.
The three billionth seedling was planted in 1993.
The four billionth seedling was planted in 1997.
The five billionth seedling will be planted in 2002.


Cumulative trees planted
Trees planted ('000)
4 000 000
3 500 000
3 000 000
2 500 000
2 000 000
1 500 000
1 000 000
500 000
0
1930 1935 1940 1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000
4 billion trees planted 1997
3 billion trees planted 1993
2 billion trees planted 1989
1 billion trees planted 1981
Data source: Forest Practices Branch

Trees planted ('000) from 81/82 to 97/98 in B.C., by responsibility

	Crown land					Private land					
		Woodlot	TSA[a]			Managed forest					
Year	TFL[b]	licence	Licensee[c]	Ministry[d]	Subtotal	TFL[e]	TF[f]	Land units[g]	Other[h]	Subtotals	TOTALS
81/82					78 344					8 700	**87 044**
82/83					97 674					7 600	**105 274**
83/84					108 373					4 100	**112 473**
84/85	15 722		73 012	27 224	115 958	1 109	4 597		50	5 756	**121 714**
85/86	17 370		65 921	28 452	111 743	779	3 919		172	4 870	**116 613**
86/87	16 519		80 115	40 574	137 208	929	1 639		95	2 664	**139 872**
87/88	23 128		115 002	57 639	195 769	994		2 880	366	4 240	**200 009**
88/89	22 876		110 197	62 251	195 324	874		2 505	9	3 388	**198 712**
89/90	21 632		113 556	73 386	208 574	243		1 505	101	1 849	**210 423**
90/91	28 148		150 144	67 303	245 595	987		3 151	51	4 189	**249 784**
91/92	31 697		101 244	93 908	226 849	453		2 261		2 714	**229 563**
92/93	28 831	159	110 734	71 164	210 888	702		3 357	658	4 717	**215 605**
93/94	25 546	435	122 133	77 634	225 748	123		36		159	**225 907**
94/95	34 006	953	145 781	71 025	251 764	379		126		504	**252 269**
95/96	39 841	919	148 683	69 475	258 918	841		895	15	1 752	**260 670**
96/97	36 910	667	150 376	45 475	233 428			103	884	987	**234 415**
97/98[i]	35 679	593	158 320	36 753	231 345	1 260		35		1 295	**232 640**

[a] Includes Crown land within timber supply areas, excluding tree farm licences, woodlot licences, farm leases, federal lands, and First Nation reserves.

[b] Includes Crown land within tree farm licences. For years 84/85 to 87/88, planting is funded by the ministry through credits against stumpage payable. On areas harvested after October 1, 1987, planting is paid for by licensees. In 1997/98, planting is funded by Forest Renewal BC, but implemented by the licensee on Crown land denuded prior to October 1, 1987. On areas denuded prior to October 1, 1987, planting is funded by the ministry, but is implemented by the licensee.

[c] Includes Crown land within timber supply areas. For years 85/86 to 87/88, planting is funded by the ministry through credits against stumpage payable. Planting for years 88/89 to 97/98, (all areas harvested after October 1, 1987), is paid for by the licensee. For all areas denuded prior to October 1, 1987, planting is funded by the ministry, but is implemented by the licensee.

[d] For 84/85, planting was funded and was the responsibility of the ministry. From 85/86 to 87/88, planting was funded by the ministry and FRDA I and was a ministry responsibility. From 88/89 to 97/98, for areas denuded after January 1, 1988 under the Small Business Forest Enterprise Program, planting was funded through the Small Business Forest Enterprise Account. From 92/93 to 97/98, the ministry implemented planting. For areas denuded prior to January 1, 1988, planting was funded by the ministry (from 88/89 to 91/92) and the Forest Resources Development Agreement (88/89 to 90/91) and the Forest Renewal Initiatives Sub-Program (90/91). Planting was the ministry's responsibility in 90/91 and 91/92. From 92/93 to 96/97, for areas denuded under the Small Business Enterprise Program prior to January 1, 1988, planting was funded and implemented by the ministry. On areas denuded prior to October 1, 1987, planting was funded by the ministry and implemented by the licensee. In 97/98, for areas denuded prior to October 1, 1987, planting was funded by Forest Renewal BC and implemented by the ministry and industry.

[e] Includes private land within tree farm licences.

[f] Includes private land within certified tree farms, but outside tree farm licences.

[g] Includes private land within managed forest land units, but outside tree farm licences. Only data reported for 93/94 to 97/98.

[h] Includes private land outside tree farm licences and certified tree farms. From 92/93 to 97/98, includes private land outside tree farm licences and managed forest land units.

[i] Includes accomplishments under all funding sources and areas fill-planted and replanted. A total of 34 930 hectares were fill planted or replanted in 1997/98. Ministry annual reporting is based on data as of March 31, 1998 taken from Ministry information systems on January 26, 1999.

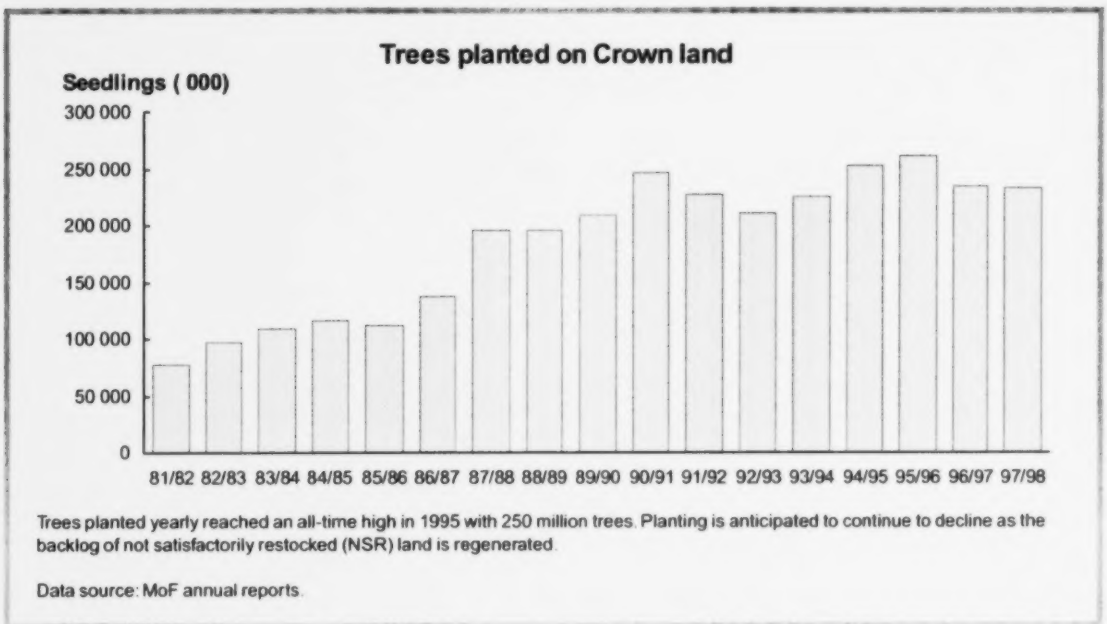
Data source: MoF annual reports.

Trees planted ('000 seedlings) from 81/82 to 97/98 on Crown land, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[a]	8 838	12 218	7 818	24 178	10 507	14 785	**78 344**
82/83[a]	9 090	18 637	7 850	24 868	16 420	20 809	**97 674**
83/84[a]	7 413	17 834	6 425	35 946	18 568	22 188	**108 374**
84/85[a]	9 545	16 445	9 313	41 708	22 115	16 832	**115 958**
85/86[a]	9 815	19 375	8 299	35 282	23 163	15 811	**111 745**
86/87[a]	14 113	22 498	14 698	46 543	22 983	16 373	**137 208**
87/88[a]	20 364	24 231	25 234	66 828	31 323	27 789	**195 769**
88/89	22 238	28 972	24 057	71 707	31 094	17 256	**195 324**
89/90	22 425	27 231	24 536	76 018	37 815	20 549	**208 574**
90/91	24 335	36 499	29 295	90 191	42 081	23 195	**245 596**
91/92	24 301	34 725	22 183	79 506	40 587	25 547	**226 849**
92/93	22 233	37 188	19 604	79 947	33 557	18 361	**210 890**
93/94	25 451	34 328	17 815	94 014	32 848	21 292	**225 748**
94/95	31 539	42 510	21 273	95 326	30 765	30 350	**251 763**
95/96	38 444	42 929	25 292	90 314	35 382	28 310	**260 670**
96/97	28 926	36 773	24 049	88 661	29 647	26 359	**234 415**
97/98	32 662	37 285	20 367	86 824	28 577	26 926	**232 640**

[a] Basic and intensive planting combined.

Data source: MoF annual reports.



Trees planted yearly reached an all-time high in 1995 with 250 million trees. Planting is anticipated to continue to decline as the backlog of not satisfactorily restocked (NSR) land is regenerated.

Data source: MoF annual reports.

DID YOU KNOW...

In 1984/85, 13 coniferous species were planted on Crown forest land throughout the province.

In 1997/98, more than 20 coniferous and deciduous species were planted.

Trees planted ('000 seedlings)[a] on Crown land from 84/85 to 97/98, by species

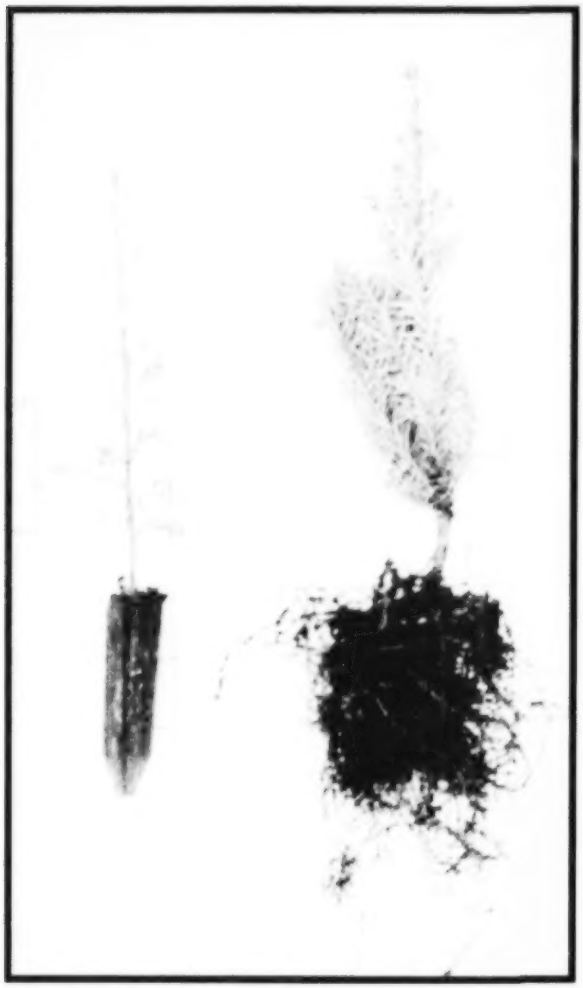
Species	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98[h]
Alder, red or Sitka										16				
Birch, paper								35	47		15	16	5	5
Cedar, western red	2 244	2 385	4 589	8 515	5 535	5 505	7 722	8 963	7 261	8 509	12 046	10 391	10 397	9 584
Cedar, yellow	186	57	117	377	41	221	359	793	628	997	1 252	1 475	2 078	1 960
Cottonwood, black[b]								100	1	108	211	148	84	59
Douglas-fir[c]	15 840	13 800	13 291	23 585	22 286	19 907	20 030	12 782	10 489	13 761	13 330	13 388	14 017	12 728
Fir, subalpine		10			72	1 007	981	1 225	846	1 806	1 498	2 596	2 525	5 022
Fir, amabilis	2 635	1 381	752	949	2 882	1 521	2 670	2 630	2 838	3 440	4 309	4 791	4 147	5 050
Fir, grand	503	468	148	406	214	357	322	861	288	150	161	129	122	100
Fir, noble									39	7	12	33	40	15
Hardwoods[d]											35	112	33	291
Hemlock, mountain	90	137	60	50	68	54	171	68	130	13	157	347	245	337
Hemlock, western	2 003	3 052	3 339	4 571	2 942	4 325	5 208	5 187	5 067	4 943	7 481	6 928	7 877	6 216
Larch, Siberian												24	49	56
Larch, western[e]	845	339	1 341	795	975	1 376	1 274	2 275	1 899	2 628	2 746	3 230	3 883	3 976
Pine, lodgepole[f]	25 289	29 981	34 765	57 867	61 661	75 489	89 167	80 852	83 077	87 178	96 935	107 632	97 513	97 147
Pine, western white	9	33	128	452	312	394	467	222	153	414	328	194	220	422
Pine, yellow	118	185	54	154	202	160	481	300	285	414	852	728	995	1 094
Spruce, Engelmann											781	22	8	172
Spruce, Engelmann and white	64 052	57 832	75 364	95 885	91 507	95 773	114 849	60 882	61 422	40 303				
Spruce, Norway											10		11	
Spruce, Sitka	2 144	2 082	3 259	2 164	6 625	2 486	1 896	2 753	1 108	1 073	1 462	2 329	1 581	1 758
Spruce, hybrid[g]								46 922	35 285	56 883	97 599	98 965	92 431	85 094
Spruce, white											7 410	3 918	189	1 898
Tamarack											13			
Yew, western											1			
Willow									24					
Other										3 856	925	2 406	30	
TOTALS	**115 958**	**111 742**	**137 207**	**195 770**	**195 322**	**208 575**	**245 597**	**226 850**	**210 887**	**226 499**	**249 569**	**259 801**	**238 480**	**232 984**

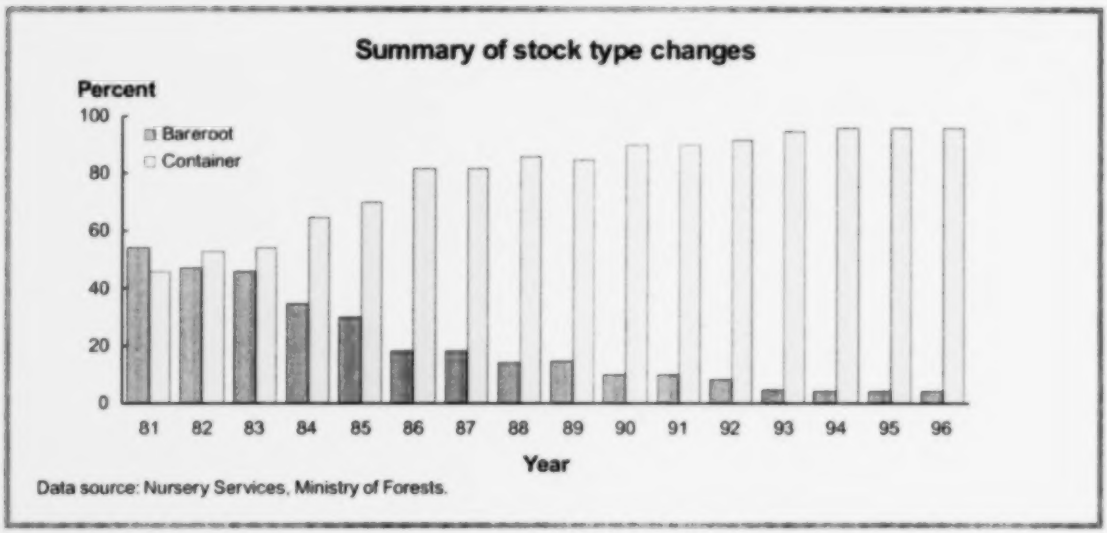
[a] Basic and backlog planting; includes trees planted through all funding sources.
[b] Includes poplar in 1992/93.
[c] Includes coastal and interior Douglas-fir.
[d] Hardwoods include alder, trembling aspen, poplar and willow. In 1997/98, includes dogwood and birch.
[e] Includes tamarack and Siberian larch in 1993/94.
[f] Includes coastal and interior lodgepole pine, and jack pine in 1992/93 and 1993/94.
[g] Includes natural crosses between Sitka, Engelmann and white spruce.
[h] Ministry annual reporting is based on data as of March 31, 1998 taken from ministry information systems on January 26, 1999. Where data entry is incomplete or delayed, numbers reported may underestimate actual accomplishments.

Data source: MoF annual reports.

DID YOU KNOW...

Significant changes in the use of container rather than bareroot stock types have occurred. Since 1994, 96% of the seedlings planted have been container stock types. Container stock types are less expensive to grow and plant and have shown excellent survival and growth.





Data source: Nursery Services, Ministry of Forests.

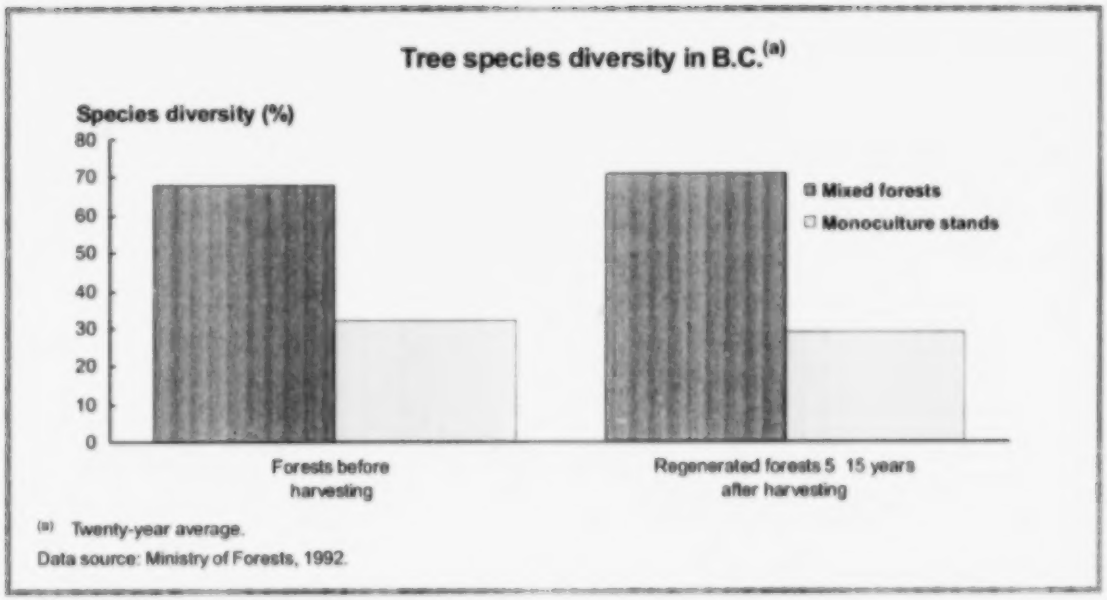
DID YOU KNOW...

Seedling survival two years after planting has increased 30% since 1982 due to better nursery practices, healthier seedlings and improved silviculture practices.

Since 1987, the average seedling survival two years after planting has been greater than 85%.

DID YOU KNOW...

Species diversity is achieved by planting two or more species and/or through natural 'seeding-in' on-site.



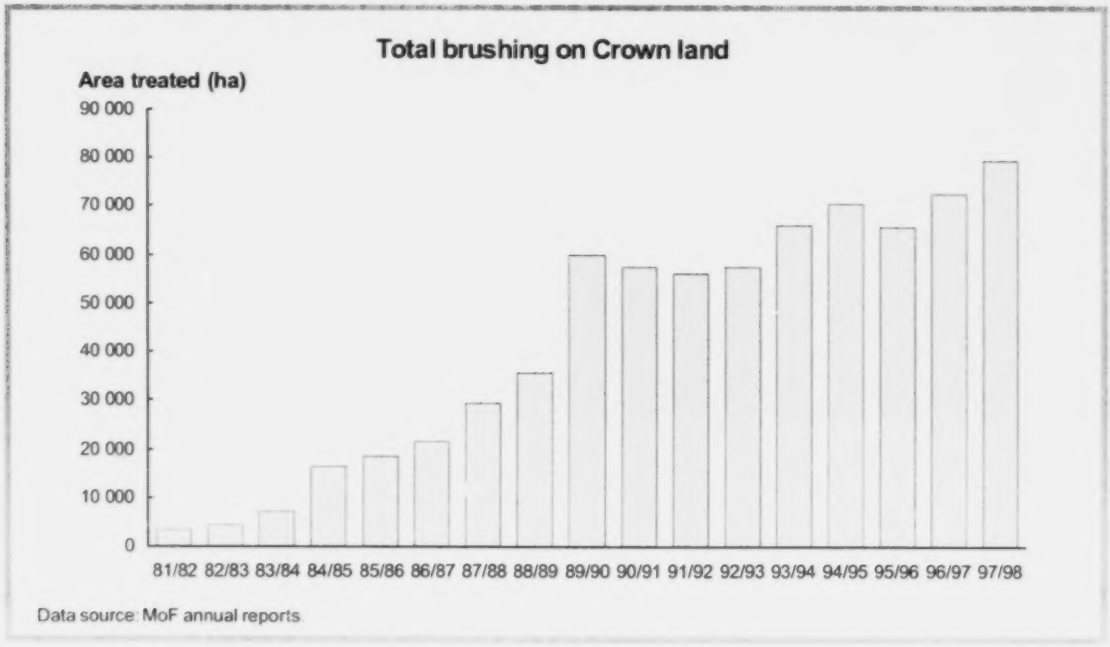
2.1.4 Brushing

Brushing[a] (ha) on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82			6		297	2 957	**3 260**
82/83		3	290		121	4 009	**4 423**
83/84			683	156	671	5 544	**7 054**
84/85	5	514	628	676	2 304	12 383	**16 510**
85/86		207	608	3 713	2 278	11 721	**18 527**
86/87	156	1 528	765	4 740	2 589	11 859	**21 637**
87/88	328	1 795	547	8 144	5 873	12 582	**29 269**
88/89	4 948	2 675	1 112	8 956	4 653	13 166	**35 510**
89/90	9 901	6 180	1 653	19 161	10 187	12 940	**60 022**
90/91	11 858	5 720	4 344	18 864	8 222	8 653	**57 661**
91/92[b]	8 394	6 649	7 295	16 974	7 107	9 660	**56 079**
92/93[b]	6 406	6 557	8 361	20 466	6 028	9 674	**57 492**
93/94[b,c]	5 204	9 475	7 874	26 191	6 517	10 620	**65 881**
94/95[b,c]	7 472	10 303	8 863	26 588	7 425	9 914	**70 565**
95/96[c]	7 665	10 132	9 123	21 421	9 780	7 751	**65 872**
96/97[c]	7 935	7 618	8 392	28 086	11 476	9 022	**72 529**
97/98[c]	8 279	9 839	8 697	31 078	10 843	10 526	**79 262**

(a) Includes chemical and non-chemical brushing.
(b) Includes activity previously called conifer release.
(c) Also includes biological and mechanical brushing.

Data source: MoF annual reports.



Data source: MoF annual reports.

Manual brushing[a] (ha) on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82			6		99	2 115	**2 220**
82/83		3	290		68	1 815	**2 176**
83/84			681	137	390	2 305	**3 513**
84/85	5	504	410	459	992	3 479	**5 849**
85/86		207	594	882	709	2 896	**5 288**
86/87	27	647	507	868	1 156	3 439	**6 644**
87/88	19	940	472	1 380	1 733	2 730	**7 274**
88/89	4 253	1 489	998	2 485	1 276	2 772	**13 273**
89/90	7 435	4 341	1 604	1 169	4 145	3 441	**22 135**
90/91	8 019	4 735	3 843	1 062	3 190	2 541	**23 390**
91/92	5 766	4 960	6 432	2 974	4 991	4 197	**29 320**
92/93	2 219	5 514	7 821	5 649	3 992	4 349	**29 544**
93/94	2 211	6 056	5 552	3 720	4 878	4 658	**27 075**
94/95	3 259	7 367	7 792	5 891	6 371	5 001	**35 681**
95/96	5 376	9 104	8 473	9 322	8 518	4 654	**45 447**
96/97	3 682	6 703	7 048	10 412	11 099	3 908	**42 852**
97/98	5 352	9 139	7 492	13 385	10 537	5 161	**51 066**

[a] Includes sheep grazing and activity previously called conifer release. May include manual cutting, manual girdling, stem bending and mulching. May include power saw, brush saw or hand-held motorized cutting equipment.

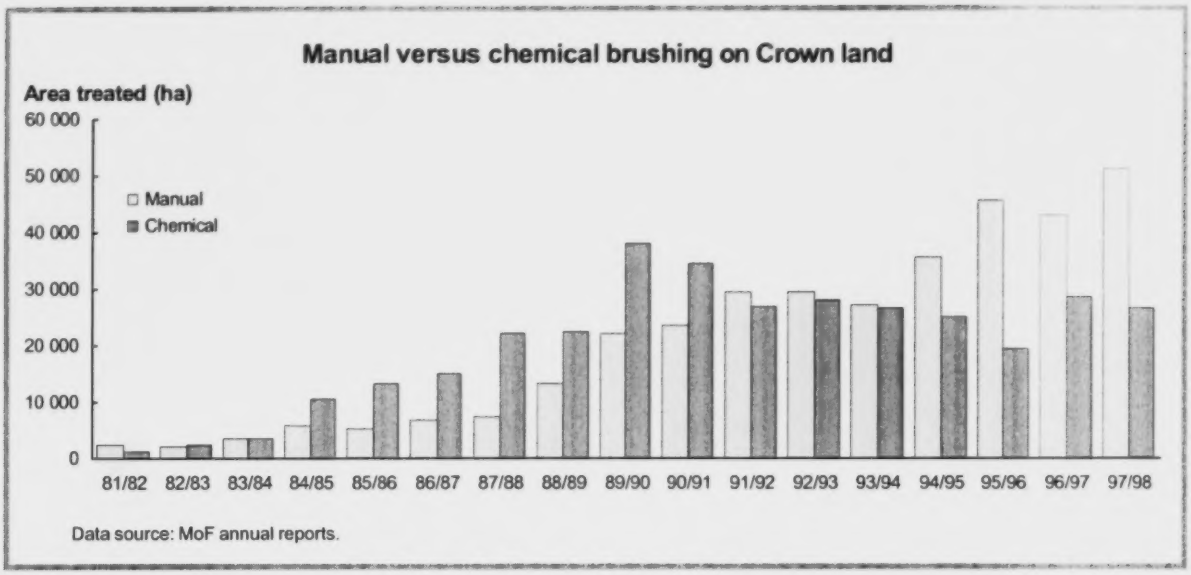
Data source: MoF annual reports.

Chemical brushing[a] (ha) on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82					198	842	**1 040**
82/83					53	2 194	**2 247**
83/84			2	19	281	3 239	**3 541**
84/85		10	218	217	1 312	8 904	**10 661**
85/86			14	2 831	1 569	8 825	**13 239**
86/87	129	881	258	3 872	1 433	8 420	**14 993**
87/88	309	855	75	6 764	4 140	9 852	**21 995**
88/89	695	1 186	114	6 471	3 377	10 394	**22 237**
89/90	2 466	1 839	49	17 992	6 042	9 499	**37 887**
90/91	3 839	985	501	17 802	5 031	6 112	**34 270**
91/92	2 628	1 689	863	14 000	2 116	5 463	**26 759**
92/93	4 188	1 043	540	14 817	2 036	5 325	**27 949**
93/94	2 382	794	680	17 857	397	4 342	**26 452**
94/95	2 991	1 105	724	15 369	244	4 539	**24 972**
95/96	2 289	1 010	650	11 957	466	2 983	**19 355**
96/97	3 598	712	1 313	17 561	377	4 993	**28 554**
97/98	2 192	700	1 205	17 378	100	5 012	**26 587**

[a] Ground and aerial application.

Data source: MoF annual reports.



DID YOU KNOW...

About 8% of brushing on Crown land was carried out using sheep and cattle in 1997/98.

2.2 Stand Tending

2.2.1 Spacing

Spacing[a] (ha) on Crown land from 81/82 to 97/98, by region

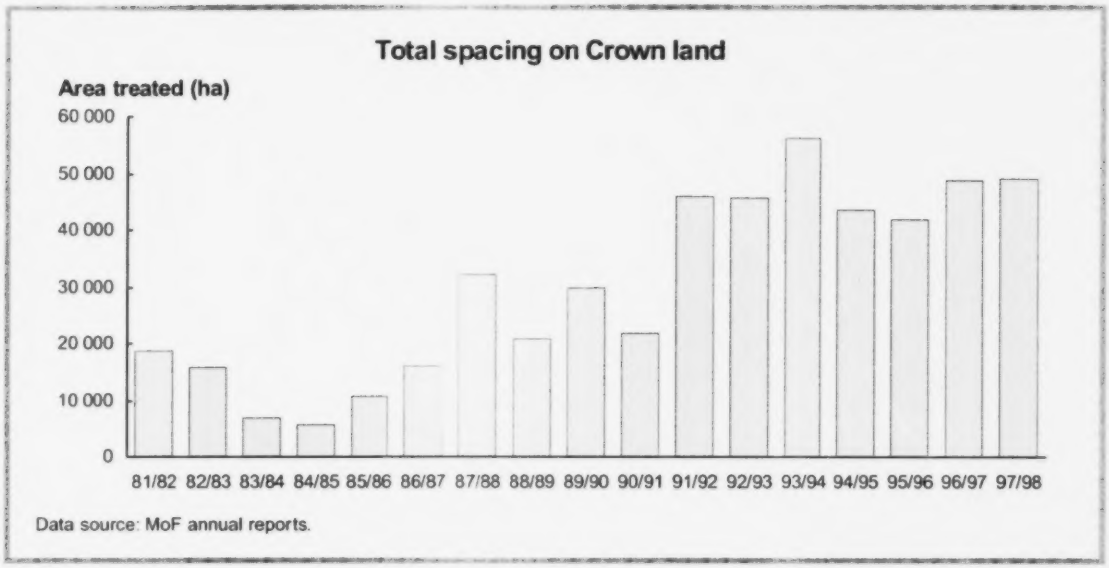
Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	2 110	1 269	1 157	795	1 323	12 017	**18 671**
82/83	531	311	635		1 526	12 846	**15 849**
83/84	801	36	444	36	236	5 200	**6 753**
84/85	767	1 730	580	240	34	2 264	**5 615**
85/86	2 047	2 375	994	588	710	4 158	**10 872**
86/87	2 091	3 131	1 804	1 623	772	6 653	**16 074**
87/88	6 640	4 381	2 842	4 307	4 787	9 327	**32 284**
88/89	4 213	2 969	2 424	2 843	1 338	6 980	**20 767**
89/90	8 228	2 987	2 692	3 541	1 600	10 818	**29 866**
90/91	6 367	2 944	3 281	2 229	1 392	5 483	**21 696**
91/92	20 163	4 362	4 681	4 453	1 906	10 273	**45 838**
92/93	14 585	7 202	6 663	3 802	3 882	9 600	**45 734**
93/94	24 096	7 211	3 710	4 073	5 956	10 944	**55 990**
94/95	11 520	6 543	4 638	4 751	5 219	10 936	**43 607**
95/96	11 325	7 003	6 266	2 919	7 427	6 853	**41 793**
96/97	10 533	8 548	5 872	5 010	8 605	9 998	**48 566**
97/98	13 099	8 153	4 969	7 834	6 297	8 641	**48 993**

[a] Includes juvenile spacing and sanitation spacing.

Data source: MoF annual reports.

DID YOU KNOW...

The hectares spaced have increased by more than two and one-half times since 1981/82.



2.2.2 Fertilization

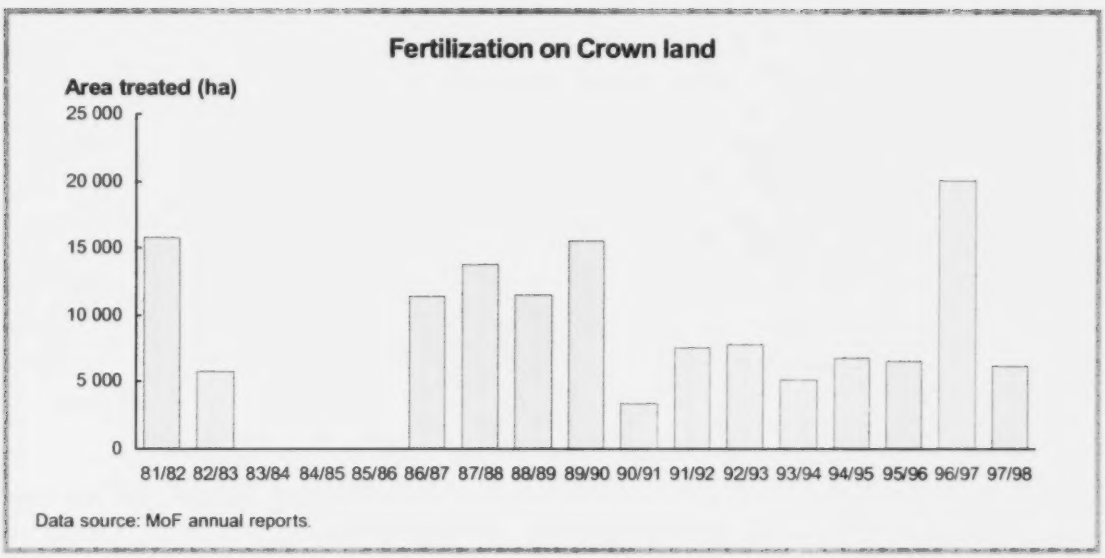
Fertilization (ha) on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82						15 746	**15 746**
82/83						5 759	**5 759**
83/84							
84/85							
85/86		10			7		**17**
86/87	946	978	985	961	902	6 609	**11 381**
87/88	1 443	1 127	1 838	2 485	1 652	5 191	**13 736**
88/89	1 560		1 597	2 175	2 250	3 879	**11 461**
89/90	1 093	1 170	1 254	2 002	1 539	8 494	**15 552**
90/91						3 426	**3 426**
91/92				149		7 451	**7 600**
92/93	822	720	1 043	679		4 565	**7 829**
93/94		1 327	81	4	10	3 758	**5 180**
94/95	11	493	966	528	138	4 732	**6 868**
95/96	274	155	72	621	248	5 178	**6 547**
96/97	922	189	2 520	824	1 302	14 263	**20 020**
97/98	659	714		483	157	4 152	**6 165**

Data source: MoF annual reports.

DID YOU KNOW...

Fertilization of coastal forests increases wood volumes up to 30 m^3/ha over 5 to 7 years on a medium site and up to 20 m^3/ha over 8 to 10 years on a medium to good site in the interior.



2.2.3 Pruning

Pruning (ha) on Crown land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[a]							
82/83[a]							
83/84[a]							
84/85[a]							
85/86[a]							
86/87[a]							
87/88[a]							
88/89[b]							
89/90[b]							
90/91[b]							
91/92	46	398	150	246	334	1 432	**2 606**
92/93	101	869	385	22	393	1 343	**3 113**
93/94	97	940	458	405	903	2 506	**5 309**
94/95	124	1 435	937	454	529	2 696	**6 175**
95/96	228	1 705	718	595	679	2 191	**6 117**
96/97	321	2 628	1 494	483	1 105	2 927	**8 958**
97/98	391	2 684	699	302	286	4 488	**8 850**

[a] Not reported.
[b] Reported as other accomplishments.

Data source: MoF annual reports.

DID YOU KNOW...

Clear wood produced by pruning can be worth four to six times more than wood left untreated.

2.3 Forest Health

Total area (ha) affected, by region (bark beetles + defoliators)

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[a]	243 637	33 170	65 016	59 148	36 779	1 230	**438 980**
82/83[a]	233 250	51 050	58 450	59 000	120 500	620	**522 870**
83/84[a]	424 975	125 700	77 385	46 600	182 450	2 125	**859 235**
84/85[a]	407 450	109 860	88 100	37 720	30 800	5 000	**678 930**
85/86[a]	242 225	256 830	14 620	5 459	57 600	35 436	**612 170**
86/87[a]	128 420	479 790	31 740	111 745	26 840	50 035	**828 570**
87/88[a]	24 150	861 450	35 825	83 700	18 600	18 570	**1 042 295**
88/89[b]	50 383	409 424	31 873	105 790	74 260	16 796	**688 526**
89/90[b]	6 820	161 845	56 300	134 760	18 275	14 180	**392 180**
90/91[c]	17 140	202 225	24 835	426 710	3 550	5 325	**679 785**
91/92[a,c]	11 100	441 780	27 027	299 945	6 510	712	**787 074**
92/93[d]	185 840	600 970	67 381	420 930	3 215	22 717	**1 301 053**
93/94[d]	57 400	80 300	71 900	420 350	6 450	4 850	**641 250**
94/95[e]	113 011	43 290	10 880	332 575	9 300	2 645	**511 701**
95/96[e,f]	6 795	10 780	8 386	237 376	22 000	1 680	**287 017**
96/97[g]	53 269[g]	39 000	[h]	359 544	[h]	24 808	**476 621**[i]
97/98[h]							
98/99	206 695[i]	116 951[i]	9 213[i]	1 956 952[i]	[h]	62 364[i]	**2 352 175**[i]

[a] Best available estimates. Accuracy varies, depending on the pest. Many more pests are endemic throughout most forests. Detailed measures of the intensity of infestation are not available.
[b] Best available estimates of current annual losses as compiled by Forestry Canada except for the Cariboo Forest Region values. Accuracy varies, depending on the pest.
[c] Best available estimates of current annual losses as compiled by Forestry Canada. Accuracy varies, depending on the pest.
[d] Best available estimates of current area affected are compiled from Ministry of Forests' and Canadian Forest Service data. Although more insects and diseases are endemic, detailed measures of the intensity of infestation are not available.
[e] Estimates of losses compiled by Canadian Forest Service, Forest Insect and Disease Survey.
[f] Infested area estimates include parks and other protected areas.
[g] Estimates of losses provided by Ministry of Forests' regional offices.
[h] Data not available.
[i] Data incomplete.

Data source: MoF annual reports.

DID YOU KNOW...

In 1994/95, timber losses due to forest diseases and insects were 7 145 000 m^3 or the equivalent of about 300 000 houses.

Area (ha) affected by bark beetles[a] from 81/82 to 98/99, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[b]	243 637	21 435	65 016	59 148	14 359	730	**404 325**
82/83[b]	232 750	22 050	45 000	59 000	30 500	500	**389 800**
83/84[b]	406 100	45 300	23 700	35 750	29 800	2 100	**542 750**
84/85[b]	383 200	58 700	24 700	28 920	28 100	5 000	**528 620**
85/86[b]	193 475	73 260	14 420	5 059	55 400	4 686	**346 300**
86/87[b]	107 240	48 840	28 040	1 375	14 940	4 485	**204 920**
87/88[b]	3 900	21 900	23 100	4 300	18 600	1 470	**73 270**
88/89[c]	1 683	19 090	25 800	4 065	13 060	966	**64 664**
89/90[c]	4 020	13 425	33 700	6 810	18 275	1 900	**78 130**
90/91[c]	3 040	7 325	23 075	19 960	3 550	870	**57 820**
91/92[b,c]	2 200	19 570	14 766	54 745	6 010	712	**98 003**
92/93[d]	3 370	24 650	14 009	136 930	3 215	1 572	**183 746**
93/94[d]	9 900	28 600	11 900	65 350	6 450	1 135	**123 335**
94/95[e]	12 491	9 455	3 280	91 475	9 300	745	**126 746**
95/96[e,f]	6 795	8 780	7 386	118 688	22 000	1 480	**165 129**
96/97[e]	[g]	1 400	[g]	100 860	[g]	1 348	**103 608[h]**
97/98[g]							
98/99	19 429[h]	20 351[h]	9 213[h]	72 380[h]	[g]	1 564[h]	**122 937[h]**

[a] Area of forests killed by bark beetles is estimated from aerial surveys done the previous year. Represents stands that were under attack the previous year.
[b] Best available estimates. Accuracy varies, depending on the pest. Many more pests are endemic throughout most forests. Detailed measures of the intensity of infestation are not available.
[c] Best available estimates of current annual losses. Accuracy varies, depending on the pest.
[d] Best available estimates of current area affected. Although more insects and diseases are endemic, detailed measures of the intensity of infestations are not available.
[e] Includes estimates of areas infested with mountain pine beetle, Douglas-fir beetle and spruce beetle.
[f] The total area estimated to be infested by balsam bark beetle is an additional 128 000 hectares, province wide.
[g] Data not available.
[h] Data incomplete.

Data source: MoF annual reports.

Area (ha) affected by insect defoliators from 81/82 to 98/99, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[a]		11 735			22 420	500	**34 655**
82/83[a]	500	29 000	13 450		90 000	120	**133 070**
83/84[a]	18 875	80 400	53 685	10 850	152 650	25	**316 485**
84/85[a]	24 250	51 160	63 400	8 800	2 700		**150 310**
85/86[a]	48 750	183 570	200	400	2 200	30 750	**265 870**
86/87[a]	21 180	430 950	3 700	110 370	11 900	45 550	**623 650**
87/88[a]	20 250	839 550	12 725	79 400		17 100	**969 025**
88/89[b]	48 700	390 334	6 073	101 725	61 200	15 830	**623 862**
89/90[b]	2 800	148 420	22 600	127 950		12 280	**314 050**
90/91[b]	14 100	194 900	1 760	406 750		4 455	**621 965**
91/92[a,b]	8 900	422 210	12 261	245 200	500		**689 071**
92/93[c]	182 470	576 320	53 372	284 000		21 145	**1 117 307**
93/94[c]	47 500	51 700	60 000	355 000		3 715	**517 915**
94/95[d]	100 520	33 835	7 600	241 100		1 900	**384 955**
95/96[g]		2 000	1 000	118 688		200	**121 888**
96/97[g]	[e]	25 000	[e]	258 684	[e]	23 460	**307 144**[f]
97/98[e]							
98/99	187 266[f]	96 600[f]	[f]	1 884 572[f]	[e]	60 800[f]	**2 229 238**[f]

[a] Best available estimates. Accuracy varies, depending on the pest. Many more pests are endemic throughout most forests. Detailed measures of the intensity of infestation are not available.

[b] Best available estimates of current annual losses. Accuracy varies, depending on the pest.

[c] Best available estimates of current area affected. Although more insects and diseases are endemic, detailed measures of the intensity of infestations are not available.

[d] Includes estimates of areas defoliated by western spruce budworm, Douglas-fir tussock moth, eastern spruce budworm, two-year cycle budworm, western hemlock looper, and western blackheaded budworm.

[e] Data not available.

[f] Data incomplete.

[g] Includes estimates of areas defoliated by western spruce budworm, eastern spruce budworm, two-year-cycle budworm and western hemlock looper. No defoliation was reported for Douglas-fir tussock moth in 1995 and 1996.

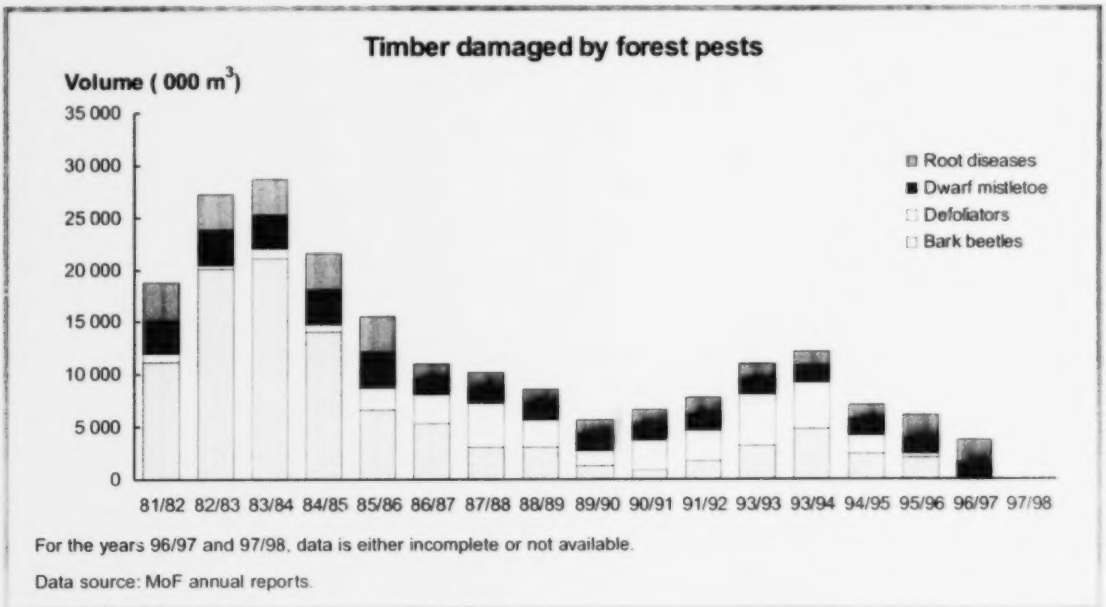
Data source: MoF annual reports.

Timber ('000 m^3)[a] damaged by forest pests[b] from 81/82 to 98/99 by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	4 199	2 807	3 939	3 639	1 783	2 375	**18 742**
82/83	14 977	1 861	2 703	2 643	3 250	1 781	**27 215**
83/84	13 785	5 891	1 639	2 352	3 300	1 772	**28 739**
84/85	8 510	4 560	1 658	1 263	3 625	1 968	**21 584**
85/86	3 987	5 298	1 203	729	2 383	1 948	**15 548**
86/87	1 941	5 139	621	1 274	1 141	922	**11 038**
87/88	763	4 946	655	1 264	1 883	730	**10 241**
88/89	809	3 947	649	1 300	1 222	701	**8 628**
89/90	653	1 357	843	1 460	708	703	**5 724**
90/91	684	1 447	565	2 882	453	651	**6 682**
91/92	647	2 654	468	2 812	495	629	**7 705**
92/93	1 408	3 410	633	4 421	444	735	**11 051**
93/94	940	4 522	666	4 927	450	673	**12 178**
94/95	1 481	792	245	3 411	550	666	**7 145**
95/96[c]	703	663	1 015	2 350	815	662	**6 208**
96/97[c]	[d]	663	[d]	2 666	[d]	662	**3 991[d]**
97/98[e]							
98/99[d]	1 430	1 036	965	8 147	388	832	**12 793[d]**

[a] Volume lost to decay in forests exceeding 100 years of age is not included. This is estimated at 10 million cubic metres per year. Nursery and regeneration losses due to other insects and diseases are also not included.
[b] Best available estimates of current annual losses. Accuracy varies, depending on type of damage. Volumes are estimated before salvage. Attacked timber is salvaged wherever practical. Includes bark beetles, defoliators, dwarf mistletoe and root diseases.
[c] Nursery and regeneration losses due to unwanted vegetation are also not included.
[d] Data incomplete.
[e] Data not available.

Data source: MoF annual reports.



For the years 96/97 and 97/98, data is either incomplete or not available.

Data source: MoF annual reports.

DID YOU KNOW...

Although the number of wildfires has increased over the past four decades, the area burned has decreased significantly over the last decade.

Area burned (ha) by wildfires[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[b,c]	1 843	1 425	654	83 291	18 696	684	**106 593**
82/83[b,c]	4 621	850	1 391	115 237	225 397	1 167	**348 663**
83/84[b,c]	3 708	762	420	43 073	19 100	315	**67 378**
84/85[b,c]	1 076	3 600	1 077	12 713	580	859	**19 905**
85/86[b,c]	6 593	5 499	60 671	109 891	43 429	10 169	**236 252**
86/87[c]	1 542	1 771	2 707	6 334	1 438	3 468	**17 260**
87/88[c]	6 480	5 496	1 959	17 333	950	1 632	**33 850**
88/89[c]	2 144	1 080	1 247	5 668	613	730	**11 482**
89/90[c]	696	1 123	2 081	13 394	7 048	1 038	**25 380**
90/91[c]	2 422	910	421	55 740	5 493	10 795	**75 781**
91/92[c]	435	1 386	1 197	18 717	8 879	300	**30 914**
92/93[c]	998	2 424	1 064	13 215	11 408	1 343	**30 452**
93/94	209	667	287	2 660	232	654	**4 709**
94/95	745	16 629	6 146	4 733	875	1 182	**30 310**
95/96	2 964	501	238	14 735	28 295	1 347	**48 080**
96/97	213	995	288	12 969	104	384	**14 952**
97/98	725	376	362	209	117	81	**1 870**

[a] Includes merchantable and immature timber, and other cover.
[b] Includes all wildfires in British Columbia.
[c] Also includes wildfires on not satisfactorily restocked land, non-commercial land, grazing land and non-productive sites.

Data source: MoF annual reports.

Timber burned ('000 m^3) by wildfires[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82[b]	22	91	113	3 591	1 045	188	**5 051**
82/83[b]	545	23	48	4 853	19 635	407	**25 511**
83/84[b]	314	42	28	1 754	3 229	24	**5 391**
84/85[b]	20	780	140	1 267	73	191	**2 471**
85/86[b]	368	401	9 320	5 464	94	2 325	**17 972**
86/87[c]	98	166	229	551	126	296	**1 466**
87/88[c]	806	283	213	2 170	106	277	**3 854**
88/89[c]	89	69	139	81	106	80	**565**
89/90[c]	22	75	159	633	890	61	**1 840**
90/91[d]	153	39	25	2 638	381	1 789	**5 025**
91/92[d]	13	18	63	793	381	42	**1 310**
92/93[b,e]	92	185	78	1 460	797	119	**2 731**
93/94[e]	21	30	31	895	12	20	**1 009**
94/95[e]	24	1 968	874	265	10	96	**3 237**
95/96[e]	181	22	18	2 332	551	291	**3 395**
96/97	37	6	17	128		138	**326**
97/98	4	0	7	16	3	4	**34**

(a) Volume of merchantable and immature timber. Timber is salvaged wherever practical.
(b) Estimates of immature timber are based on species and generalized age and site information; complete mortality is assumed.
(c) The forest cover loss report by region before salvage. Estimates of immature timber are based on species and generalized information on age and site; complete mortality is assumed.
(d) Same as (c) except forest cover loss by region before salvage.
(e) Forest cover loss report by forest region before salvage.

Data source: MoF annual reports.

Weed control[a] (ha) on Crown range land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	TOTALS
81/82	34	266	37	280			**617**
82/83[b]	56	300	205	95			**656**
83/84[c]	71	139	48	20			**278**
84/85[d]	112	219	131	39			**501**
85/86[e]	32	678	218	84			**1 013**
86/87	53	658	336	84			**1 131**
87/88	64	728	221	58		1	**1 072**
88/89	7	492	143	59	10		**711**
89/90	9	801		82		1	**892**
90/91	2	1 287	58	49	15		**1 411**
91/92	67	313	55	52			**487**
92/93	11	[f]		44	7	1	**63**
93/94	6	482	69	41	12		**610**
94/95	7	1 131	27	48	18		**1 231**
95/96[f]							
96/97[f]							
97/98[f]							

[a] Control of knapweed, thistle and other species.
[b] In 1982/83, includes containment of knapweed (497 ha), thistle (127 ha) and other species (32 ha).
[c] In 1983/84, includes containment of knapweed (247 ha), thistle (25 ha) and other species.
[d] Includes control of knapweed (449 ha), thistle (51 ha) and other species (1 ha).
[e] Includes containment of knapweed (886 ha), thistle (65 ha) and other weeds (38 ha).
[f] Information not available.

Data source: MoF annual reports.

2.4 Expenditures

Silviculture expenditures[a,b] ($ '000) under all ministry-funded programs from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P Rupert	Vancouver	Victoria	TOTALS
81/82	4 737	6 550	4 587	10 773	5 967	22 646	20 789	**76 049**
82/83	5 293	9 018	5 303	13 150	8 915	26 293	25 822	**93 794**
83/84[c]	5 149	9 271	4 543	17 133	9 551	16 716	25 628	**87 991**
84/85[d]	6 162	12 680	6 616	20 818	10 543	16 381	33 971	**107 171**
85/86[e]	7 535	12 588	8 414	24 829	11 187	20 135	46 784	**131 472**
86/87[f]	8 905	15 350	11 467	27 283	13 373	22 292	37 845	**136 515**
87/88[g]	11 183	17 604	14 647	33 676	17 649	25 217	34 627	**154 603**
88/89[h]	16 536	22 393	21 212	44 633	23 301	26 427	47 417	**201 919**
89/90[i]	18 975	24 042	21 736	48 282	26 841	30 025	48 935	**218 836**
90/91[j]	15 379	25 888	24 637	46 539	28 108	24 984	46 577	**212 112**
91/92[k]	19 808	29 034	27 917	47 406	26 902	37 009	56 759	**244 835**
92/93[l]	19 696	32 241	26 838	46 182	24 191	31 077	46 545	**226 770**
93/94[m]	21 011	36 782	25 374	50 572	27 400	37 252	12 220	**210 611**
94/95[n, o]	20 536	28 916	20 065	39 758	22 667	27 606	32 263	**191 811**
95/96[o, p]	13 670	20 952	13 697	33 643	17 727	22 642	12 011	**134 342**
96/97[o, q]	3 411	5 638	3 417	10 014	5 754	4 629	9 652	**42 515**
97/98[o, r]	2 901	4 256	2 980	8 403	3 339	5 148	8 154	**35 181**

[a] For years 81/82 to 87/88 includes expenditures in ministry nurseries, commercial nurseries, and licensee nurseries as approved under Section 88 of the Forest Act. Expenditure for employee benefits are excluded in all annual report figures.

[b] Does not include privately funded silvicultural expenditures.

[c] Includes $12.074 million for ministry nurseries, $4.892 million for commercial nurseries, and $4.167 million for Section 88 credits for licensee nurseries.

[d] Includes $16.991 million for ministry nurseries, $6.825 million for commercial nurseries, and $4.058 million for Section 88 credits for licensee nurseries.

[e] Includes $22.416 million for ministry nurseries, $8.947 million for commercial nurseries, and $2.893 million for licensee nurseries as approved under Section 88 of the Forest Act.

[f] Includes $65.729 million in expenditures made by licensees made under Section 88 of the Forest Act.

[g] Includes $82.861 million in expenditures made by licensees under Section 88 of the Forest Act. Also includes $15.257 million for ministry nurseries and $9.883 million for commercial nurseries.

[h] Includes federal job-creation programs $0.909 million and others such as the provincial Corrections Program amount of $0.383 million.

[i] Includes federal job-creation programs ($1.078 million) and the Joint Job Creation Program ($0.466 million).

[j] Excludes $4.677 million transferred to Small Business Forest Enterprise Program for administration expenses.

[k] Excludes $16.401 million transferred to Small Business Enterprise Program for administration expenses. Includes $3.070 million for nursery operations and development.

[l] Excludes $4.932 million transferred to the Small Business Forest Enterprise Program for administration purposes.

[m] Excludes $4.935 million transferred to the Small Business Forest Enterprise Program for administration purposes. Includes audits and fire and pest sub-programs. Excludes $24.435 million transferred to the Forest Worker Development Program.

[n] There have been significant changes in reporting expenditures in 1994/95. Previously expenditures were reported by program; in 1994/95 they are reported by vote structure. For 1994/95, silviculture expenditures include sub votes: Resource Planning and Allocation, Resource Use, Monitoring, Enforcement and Audit, Forest Investment, Forest Resource Development Agreement (FRDA II), Small Business Forest Enterprise Program and South Moresby Implementation–Forest Replacement Account.

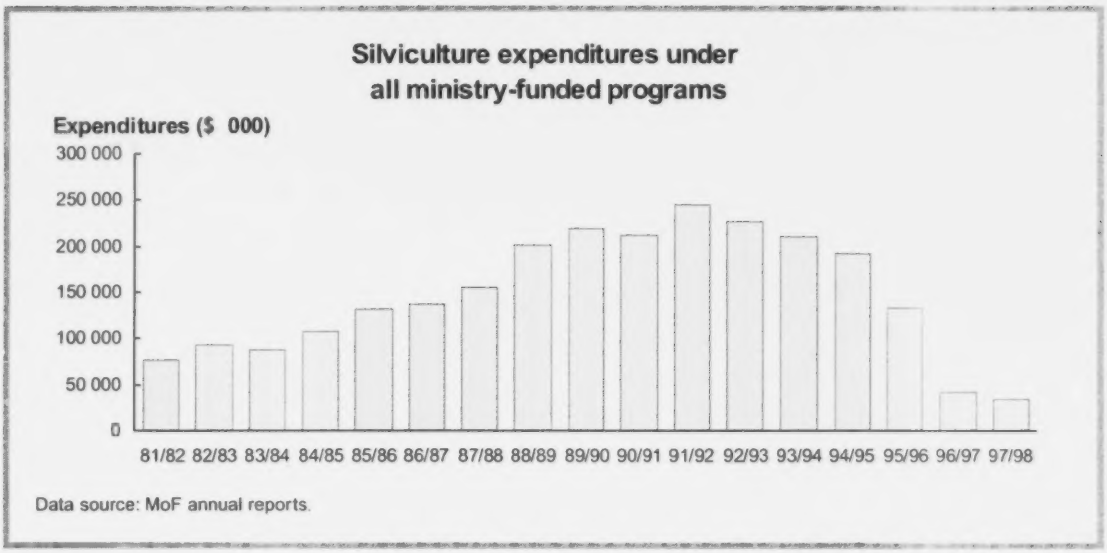
[o] **Silviculture expenditures do not include Forest Renewal expenditures.**

[p] Includes sub votes: Resource Planning and Allocation; Resource Use; Monitoring, Enforcement and Audit; Forest Investment; Forest Resource Development Agreement (FRDA II); Small Business Forest Enterprise Program and South Moresby Implementation–Forest Replacement Account.

[q] Includes sub votes: Resource Planning and Allocation; Resource Use; Forest Investment; Small Business Forest Enterprise Program and South Moresby Implementation–Forest Replacement Account.

[r] Includes sub votes: Forest Resource Policy, Practices and Inventory; Small Business Forest Enterprise Program and South Moresby Implementation–Forest Replacement Account.

Data source: MoF annual reports.



Data source: MoF annual reports.

Average cost ($/ha)[a] of silviculture treatments on Crown land in 97/98, by region

Activities	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
BASIC SILVICULTURE							
Surveying[b]	16	16	21	17	16	11	**16**
Preparing sites	397	646	568	490	597	911	**525**
Planting[c]	313	338	527	497	391	554	**419**
Brushing: biological[d]	366	248		287	468		**359**
Brushing: chemical air[e]	269			351		227	**311**
Brushing: chemical ground[e]		799	601	857		633	**735**
Brushing: manual, non-motorized[f]	615	499	522	630	526	659	**562**
Brushing: manual, motorized[g]	241	474	601	629	570	558	**531**
Brushing: mechanical				592		588	**588**
Spacing[h]	519	606	769	523	585	682	**551**
INCREMENTAL SILVICULTURE							
Surveying[i]	19	15	19	18	19	16	**18**
Spacing[j]	437	583	671	720	669	1 040	**691**
Fertilizing[k]	315	296		324	116	170	**286**
Pruning[l]	946	935	787	952	859	1 145	**1 012**

[a] Average hectare cost was based on data collected for all treatments for which cost information was provided, as at March 31, 1998, taken from ministry information systems on January 27, 1999. Includes site operating costs for equipment, transportation, and wages for crew and crew boss.

[b] Includes surveys for assesssing site treatment, plantation survival, stocking, pre-harvest silviculture prescription and free-growing status. Excludes reconnaissance and drainage surveys.

[c] Excludes cost of seedlings.

[d] Includes sheep and cattle grazing.

[e] Includes cost of herbicides.

[f] May include manual cutting, manual girdling, stem bending and mulching.

[g] May include power saw, brush saw or hand-held motorized cutting equipment.

[h] Spacing required for stands to reach free-growing status.

[i] Surveys to plan for fertilizing, pruning and spacing activities

[j] Excludes spacing for mistletoe control.

[k] Includes cost of fertilizer.

[l] Includes first and second lift pruning costs.

Data source: MoF 1997/98 Annual Report.

Average cost ($/ha) of basic surveys[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82[b]							
82/83[b]							
83/84	7	10	12	8	7	8	8
84/85	6	6	11	6	8	9	8
85/86	4	5	7	6	6	9	6
86/87	5	6	6	8	10	8	8
87/88	6	6	5	8	8	11	7
88/89	7	7	8	10	8	12	9
89/90	12	8	9	10	12	9	10
90/91	14	10	15	11	14	14	13
91/92	11	10	16	12	9	14	12
92/93	12	12	17	14	14	14	14
93/94	14	12	20	16	17	19	16
94/95	14	13	22	16	17	16	15
95/96	14	13	22	18	17	14	16
96/97	16	16	22	17	20	15	17
97/98	16	16	21	17	16	11	16

[a] Surveys for assessing site treatment, plantation survival, stocking and free growing. Average cost based on on-site operating cost (equipment, transportation and wages). Does not include overhead cost (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality). Excludes reconnaissance and drainage surveys. Costs are as reported in Ministry of Forests information systems.

[b] Not reported.

Data source: MoF annual reports.

Average cost ($/ha) of site preparation[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82	127	149	126	154	86	72	**136**
82/83	130	203	71	142	118	124	**134**
83/84	158	251	132	166	163	98	**164**
84/85	139	248	168	145	136	140	**157**
85/86	153	202	195	130	140	183	**150**
86/87	188	230	239	209	183	343	**221**
87/88	105	140	289	285	136	659	**225**
88/89	251	191	326	265	194	400	**244**
89/90	298	288	296	230	228	549	**261**
90/91	312	258	425	377	389	570	**345**
91/92	471	414	513	346	507	554	**413**
92/93	358	443	464	368	497	569	**411**
93/94	329	437	528	419	559	625	**436**
94/95	326	549	465	625	578	532	**511**
95/96	285	631	618	529	410	557	**503**
96/97	353	634	673	452	396	842	**497**
97/98	397	646	568	490	597	911	**525**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of planting[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82	275	251	325	261	275	222	**257**
82/83	292	274	328	262	288	263	**276**
83/84	326	255	288	269	291	269	**275**
84/85	311	289	356	275	268	327	**297**
85/86	270	278	291	252	229	305	**267**
86/87	303	315	367	278	275	326	**303**
87/88	388	422	548	361	331	428	**387**
88/89	406	420	482	370	341	434	**405**
89/90	445	429	529	410	379	439	**425**
90/91	481	516	558	484	469	538	**499**
91/92	451	484	565	482	497	552	**494**
92/93	503	514	590	459	472	621	**508**
93/94	457	473	469	440	453	539	**465**
94/95	340	355	466	482	400	524	**412**
95/96	347	358	453	509	419	500	**430**
96/97	312	344	537	471	446	481	**425**
97/98	313	338	527	497	391	554	**419**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems, but excluding the cost of seedlings.

Data source: MoF annual reports.

Average cost ($/ha) of manual brushing[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82			771		343	222	**229**
82/83		430	384		604	268	**294**
83/84			341	336	529	305	**338**
84/85	764	388	330	244	516	368	**383**
85/86		628	385	368	516	462	**450**
86/87	345	426	525	494	478	561	**520**
87/88		491	401	548	475	487	**489**
88/89	736	511	433	584	364	451	**539**
89/90	378	415	598	772	469	819	**541**
90/91	377	575	878	753	494	625	**601**
91/92	477	677	760	627	620	607	**642**
92/93	362	542	545	537	538	548	**524**
93/94	362	425	503	423	416	595	**448**
94/95	505	507	505	531	622	627	**535**
95/96	456	472	692	504	501	596	**493**
96/97	447	465	486	530	492	468	**499**
97/98	413	468	548	550	542	624	**521**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of chemical brushing[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82					265	173	**191**
82/83					230	193	**194**
83/84			1 393	441	445	373	**379**
84/85		93	638	597	486	338	**367**
85/86			1 095	203	208	375	**299**
86/87	683	401	626	255	296	384	**350**
87/88	213	445	508	208	263	400	**296**
88/89	274	378	417	217	391	399	**338**
89/90	250	381	591	210	284	481	**289**
90/91	208	369	349	184	278	455	**249**
91/92	197	549	354	190	288	392	**250**
92/93	214	367	662	221	173	358	**252**
93/94	354	452	643	266	194	453	**317**
94/95	234	364	483	368	257	442	**368**
95/96	304	330	803	293	279	533	**352**
96/97	319	540	603	341		547	**393**
97/98	269	799	601	414		467	**417**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages), including the cost of herbicides, but excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of spacing[a] from 81/82 to 90/91, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82	322	479	162	336	760	946	**749**
82/83	263	162	239		682	661	**623**
83/84	191	926	189	127	488	478	**426**
84/85	344	557	114	399	1 110	597	**498**
85/86	486	485	398	419	961	670	**575**
86/87	438	578	487	451	649	687	**595**
87/88	453	590	621	459	739	800	**619**
88/89	434	603	787	449	691	792	**635**
89/90	470	672	822	604	754	853	**718**
90/91	427	558	804	554	903	900	**834**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) for juvenile spacing and sanitation spacing, excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of basic spacing[a] from 91/92 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
91/92	391	695	1 180		279		**454**
92/93	436	692	677		356		**464**
93/94	388	549	762	429	402	1 607	**479**
94/95	407	670	679	767	845	1 233	**618**
95/96	427	656	610	663	741	866	**586**
96/97	452	556	481	378	514	953	**467**
97/98	519	606	769	523	585	682	**551**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) for spacing required for stands to reach free growing status, excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of incremental spacing[a] from 91/92 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
91/92	332	582	736	613	899	976	**618**
92/93	262	648	591	513	789	998	**613**
93/94	310	593	632	571	882	924	**652**
94/95	409	524	603	519	543	957	**630**
95/96	432	540	606	726	659	1 022	**665**
96/97	439	552	719	398	645	929	**606**
97/98	437	583	671	720	669	1 040	**691**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) excluding spacing for mistletoe control and overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of pruning[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82							
82/83							
83/84							
84/85							
85/86							
86/87							
87/88							
88/89							
89/90							
90/91							
91/92	663	791	1 094	1 080	902	841	**893**
92/93	815	846	762		1 042	1 240	**1 060**
93/94	1 211	773	929	792	948	920	**880**
94/95	882	942	883	794	879	1 002	**939**
95/96	977	942	787	1 225	953	1 160	**1 037**
96/97	888	956	797	854	629	1 089	**913**
97/98	946	935	787	952	859	1 145	**1 012**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) for first and second lift pruning, excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of fertilization[a] from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82						234	**234**
82/83						227	**227**
83/84							
84/85							
85/86		169					**169**
86/87	176	184	179	170	200	194	**189**
87/88	166	157	172	175	157	173	**169**
88/89	203		187	203	179	166	**185**
89/90	207	194	183	215	211	176	**181**
90/91						159	**159**
91/92				244		164	**168**
92/93	108	134	200	185		137	**145**
93/94		166	151		187	152	**156**
94/95		161	231	196		158	**174**
95/96	261			406	223	196	**221**
96/97	284		207		339	223	**238**
97/98	316	296		324	116	170	**286**

[a] Costs are weighted average on-site operating costs (equipment, transportation and wages) including the cost of fertilizer, but excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost ($/ha) of incremental surveys from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82							
82/83							
83/84	11	7	6	6	3	6	7
84/85	7	5	8	5	6	8	6
85/86	2	6	6	6	6	8	5
86/87	8	7	7	8	14	7	8
87/88	12	9	6	9	10	15	10
88/89	10	10	10	12	11	14	11
89/90	16	8	17	9	16	17	13
90/91	15	12	15	11	6	11	12
91/92	12	11	21	14	19	16	15
92/93	13	11	22	14	19	18	17
93/94	6	13	16	19	15	16	14
94/95	11	13	15	16	18	19	16
95/96	19	14	21	21	20	12	17
96/97	9	17	19	20	25	15	17
97/98	19	15	19	18	19	16	18

(a) Costs are weighted average on-site operating costs (equipment, transportation and wages) for surveys assessing stand conditions and stand tending opportunities, excluding overhead costs (initial field inspection, planning and prescription, site delineation, general supervision of project and final inspection to check quality) as reported in Ministry of Forests information systems.

Data source: MoF annual reports.

Average cost[a] ($/ha) of weed control[b] on Crown range land from 81/82 to 97/98, by region

Year	Cariboo	Kamloops	Nelson	P. George	P. Rupert	Vancouver	PROVINCE
81/82							
82/83[c]	740	451	282	221			390
83/84[c]	341	372	374	141			348
84/85[d]	289	456	294	203			357
85/86[e]	1 854	309	304	218			349
86/87[f,g]	1 190	212	182	413		1 250	44
87/88[f,h]	587	243	236	478		400	349
88/89[f,i]	3 540	262	386	450	20		
89/90[f,i]	1 317	329				1 050	
90/91[f,i]	6 458	144	1 304	992	180		
91/92[f,j]	13 055	782	1 626	764			
92/93[f,k]	4 280	[m]		1 122		1 000	
93/94[f,k]	12 031	700	484	1 509	413		
94/95[f,l]	7 976	345	1 140	1 910	3 535		
95/96[m]							
96/97[m]							
97/98[m]							

[a] Based on funds from the Range Management Program and other ministry programs and private sources (on cost-sharing projects) for the years 82/83 to 94/95.
[b] Includes containment of knapweed, thistle and other species.
[c] Excludes improvements funded by the Agriculture Resource Development Subsidiary Agreement (ARDSA), Employment Bridging Assistance Program (EBAP) and wholly by non-ministry sources.
[d] Excludes improvements funded by ARDSA and wholly by non-ministry sources.
[e] Excludes improvements funded by the Forest Work Activity Program (FWAP), and by other non-ministry sources.
[f] Also based on funds from other sources (on cost-sharing projects).
[g] Excludes improvements funded by the Forestry Social Assistance Recipient Program (FORSAR), and exclusively by other non-ministry sources.
[h] Excludes improvements funded by forestry Jobtrac Program and exclusively by other non-ministry sources.
[i] Excludes improvements funded by the Forest Enhancement Program (FEP) and exclusively by other non-ministry sources.
[j] Excludes improvements funded by unit work crews and exclusively by other non-ministry sources.
[k] Excludes improvements funded by non-ministry sources, and the Partnership Agreement on Forest Resource Development (FRDA II).
[l] Excludes improvements funded exclusively by non-ministry sources.
[m] Data not available.

Data source: MoF annual reports.

B.C./CANADA

STATISTICS

CONTENTS

3 B.C./Canada Statistics

3.1 Forestry Practices 78

Total Crown and private land available for timber production in 1991, by province 78
Allowable annual cut on Crown and private land, by province 78
Area harvested from 1981 to 1997, by province 79
Canada timber harvest, by region 80
Canada harvest by region (chart) 80
Area planted from 1981 to 1997, by province 81
Area of site preparation from 1981 to 1997, by province 82
Total area of stand tending on Crown and private land from 1981 to 1997, by province 83
Total silviculture expenditures on Crown and private land 1985, 1988, and 1990 to 1996 83
Size of clearcuts by ownership and by province for the latest period calculated 84

3.2 Forest Products and Economics 85

B.C. versus rest of Canadian forest industries: volume production by commodity – 1997 (chart) 86
British Columbia exports – by product groups – 1998 (chart) 88
B.C. forest product exports – 1997 (chart) 88
B.C. forest product export destination – 1997 (chart) 89
B.C. forest industry and the provincial economy – 1998 (chart) 89
B.C. gross domestic product goods producing industries – 1998 (chart) 90
Employment in the forest industry in B.C. 91
Forest employment in B.C. per 1000 m^3 logs harvested 1990–1997 (chart) 92
B.C. silviculture employment factors 92
British Columbia – estimated log and fibre usage – 1998 harvest (chart) 93

3 B.C./Canada Statistics

3.1 Forestry Practices

Total Crown and private land ('000 ha) available for timber production in 1991, by province

Land type	B.C.	Alta.	Ont.	Que.	N.B.	Other[a]	Canada
Crown	46 671	21 711	34 867	45 239	2 888	56 693	**208 069**
Private	2 122	1 284	5 538	7 771	2 995	4 539	**24 249**
Total	**48 793**	**22 995**	**40 405**	**53 010**	**5 883**	**61 232**	**232 318**

[a] Other includes: Nfld., P.E.I., N.S., Man., Sask., Yukon, N.W.T.

Data source: Canadian Council of Forest Ministers, 1998.

Allowable annual cut (AAC) ('000 m^3) on Crown and private land, by province

	Years AAC statistics relevant		'000 m^3
B.C.	1998	Crown	68 456
		Private	2 563
Alta.		Crown	23 357
Ont.[a]	1997	Crown	
Que.	1994–1999	Crown	45 019
		Private	13 305
N.B.	1997–2002[b]	Crown	5 023
		Private	5 948

[a] Ontario determines the annual cut in hectares.
Provincial Crown land annual allowable harvest is 364 297 hectares.
[b] Based on the 1997 analysis.

Data source: Canadian Council of Forest Ministers, 1998.

DID YOU KNOW...

Canada:
Forest land: 247 164 000 ha
Portion of total land base: 27%
Forest land per capita: 8.1 ha

Data source: FAO, 1995.

Area harvested (ha) from 1981 to 1997, by province

Year	B.C.	Alta.	Ont.	Que.	N.B.	Other[a]	Canada
1981	147 889	20 424	227 603	250 000	65 500	83 691	**795 107**
1982	162 172	27 864	222 921	195 000	72 445	72 564	**752 966**
1983	208 252	34 870	183 208	272 085	81 570	68 028	**848 013**
1984	216 417	29 290	217 806	280 739	83 000	85 404	**912 656**
1985	231 730	34 612	217 984	266 180	87 070	81 455	**919 031**
1986	239 877	38 811	223 517	297 616	86 898	85 094	**971 813**
1987	259 982	40 248	228 464	329 300	88 976	103 879	**1 050 849**
1988	270 401	42 538	237 188	337 668	99 192	99 111	**1 086 098**
1989	218 384	41 688	230 308	342 231	90 114	95 093	**1 017 818**
1990	181 530	47 671[b]	238 213	255 094	80 109	91 305[c]	**892 869[c]**
1991	193 654	50 628[b]	199 719	229 525[c]	91 916	85 175[c]	**856 402[c]**
1992	221 599	53 147[b]	190 676	256 271	99 751[c]	85 802[c]	**905 755[c]**
1993	207 748	57 087[d]	206 000[c]	294 201	97 793[c]	97 998[c]	**968 574[c]**
1994	190 244	74 298[b]	209 700[c]	321 634	92 790[e]	111 519[c]	**1 000 185**
1995	189 608	65 321[b]	214 104[b]	338 515	99 857	110 252[c]	**1 017 657**
1996	199 029	55 830[d]	213 235[b]	348 313[c]	108 730[b]	118 781[c]	**1 043 918**
1997	175 808	50 697[d]	197 941[d]	363 844[c]	112 436[c]	122 954[d]	**1 023 680**

[a] Other includes: Yukon, N.W.T., Sask., Man., N.S., P.E.I., Nfld.
[b] Revised.
[c] Estimated by provincial or territorial forestry agency.
[d] Preliminary.
[e] Estimated by Natural Resources Canada, Canadian Forest Service or by Statistics Canada.

Data source: Canadian Council of Forest Ministers, 1998 and MoF annual reports.

DID YOU KNOW...

B.C. has only 17% of Canada's total forest land but grows almost 40% of the nation's merchantable timber.

Data source: Westland Resource Group, 1995.

DID YOU KNOW...

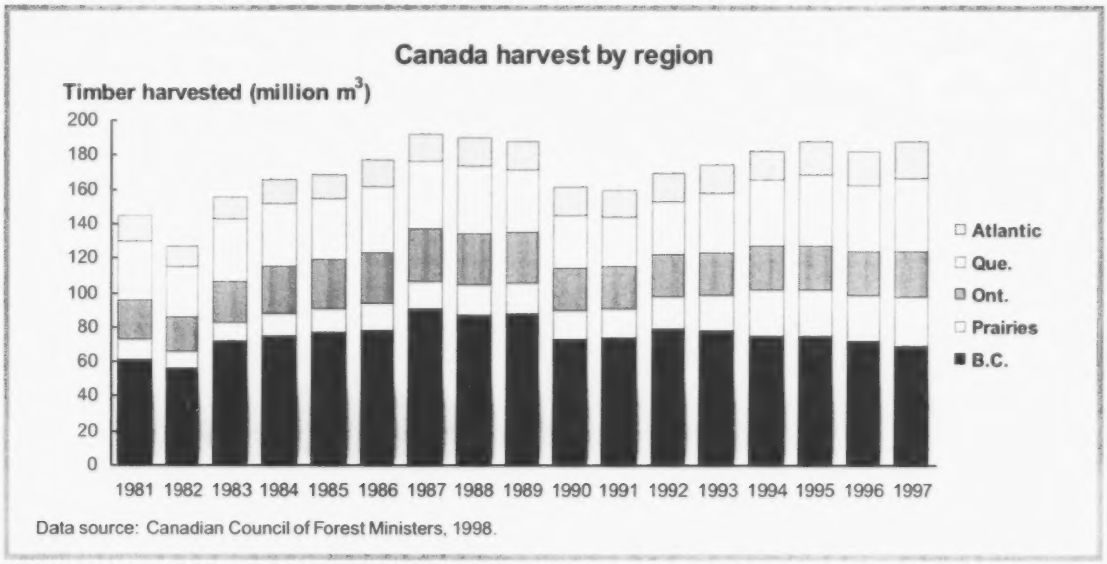
In general, B.C. harvests less area annually than Ontario and Quebec yet plants two to three times more area per year.

Canada timber harvest, by region ('000 m^3)

Year	B.C.	Prairies[a]	Ont.	Que.	Atlantic[b]
1981	60 780	11 944	22 808	34 234	14 846
1982	56 231	9 738	19 788	29 133	12 142
1983	71 443	11 476	23 736	36 288	12 831
1984	74 556	12 883	28 130	36 519	13 560
1985	76 868	13 712	28 225	35 400	14 330
1986	77 503	15 619	30 186	38 127	15 556
1987	90 591	16 269	29 692	39 503	15 661
1988	86 807	17 691	29 338	39 381	17 226
1989	87 414	17 826	29 642	36 192	17 004
1990	73 861	16 232[c]	25 420[c]	30 148[c]	16 787
1991	74 706	17 161[c]	23 829[d]	28 943[c]	16 123
1992	78 579	19 273	24 287[d]	31 002[c]	16 784
1993	78 004	20 155	25 432[d]	34 100[c]	17 209[c]
1994	75 093	26 044[c]	25 952[d]	38 227[c]	17 339[c]
1995	74 622[d]	26 532[c]	26 260[d]	41 432[c]	19 159[c]
1996	72 252[d]	26 311[c]	25 871[d]	38 273[e]	20 213[c]
1997	69 298[d]	28 615[c]	26 595[d]	42 447[c]	20 800[c]

[a] Includes Alta., Man. and Sask.
[b] Includes Nfld., P.E.I., N.S. and N.B.
[c] Estimated by provincial or territorial forestry agency.
[d] Estimated by National Resources Canada, Canadian Forest Service or Forestry Canada.
[e] Revised.

Data source: Canadian Council of Forest Ministers, 1998.



Data source: Canadian Council of Forest Ministers, 1998.

Area planted (ha) from 1981 to 1997, by province

Year	B.C.[a]	Alta.[b]	Ont.[c]	Que.[c]	N.B.	Other[d]	Canada
1981	66 605	5 495	38 159	15 875	22 121	13 237	**161 492**
1982	82 795	5 398	38 040	17 120	22 458	13 612	**162 303**
1983	94 726	7 547	48 772	19 834	19 985	14 626	**185 656**
1984	100 032	13 795	63 354	30 960	19 406	14 510	**211 097**
1985	101 442	9 229	72 678	42 716	19 453	19 323	**222 125**
1986	115 739	14 699	73 857	65 584	20 517	19 453	**244 265**
1987	169 002	13 279	75 158	81 147	18 916	24 570	**300 925**
1988	169 485	18 658	83 712	107 415	19 123	31 246	**322 224**
1989	174 310	24 254	85 287	116 452	20 272	26 579	**330 702**
1990	209 168	25 475[f]	80 840	110 595	22 079	27 360	**339 447**
1991	199 422	32 383[f]	83 917	103 714	19 497	26 744	**329 580**
1992	184 922	36 930[f]	71 792	97 189	16 526	25 674	**298 914**
1993	190 176	34 924[f]	73 684	84 491	13 089	21 903	**417 863[f]**
1994	216 811	48 726[e]	73 880[e]	77 480[f]	15 399	24 585	**456 881[f]**
1995	206 473	51 162[f]	64 732[e]	70 783[f]	16 162[e]	25 420	**434 732[f]**
1996	189 322	41 412[f]	72 899[f]	73 002[e]	15 919	25 636	**418 190[f]**
1997	188 474	45 343[f]	72 784	73 697[e]	19 963	33 565[g]	**433 826[g]**

[a] Crown land only.
[b] From 1981 to 1985, an additional 41 429 ha were planted under a special stand conversion program.
[c] Aerial seeding, a large component of seeding/planting activities, is not accounted for in these statistics.
[d] Includes Nfld., P.E.I., N.S., Man., Sask., and N.W.T.
[e] Includes Nfld., and Yukon.
[f] Revised.
[g] Estimate by provincial or territorial forestry agency.

Data source: Canadian Council of Forest Ministers, 1998.

Area of site preparation (ha) from 1981 to 1997, by province

Year	B.C.[a,b]	Alta.	Ont.	Que.	N.B.	Other[c]	Canada
1981	54 893	13 568	57 157	16 152	27 384	24 757	**193 911**
1982	62 631	16 611	71 819	14 800	18 601	25 780	**210 242**
1983	73 439	19 607	78 142	21 940	11 132	19 725	**223 985**
1984	84 413	18 082	86 932	29 902	8 862	25 224	**253 415**
1985	91 421	19 404	98 953	50 906	9 293	30 654	**300 631**
1986	133 709	22 368	110 152	91 818	12 981	33 300	**404 328**
1987	177 024	28 963	116 226	112 447	16 778	37 535	**488 973**
1988	151 546	31 954	106 479	99 559	15 318	36 656	**441 512**
1989	171 300	25 807	124 404	117 259	16 563	31 807	**487 140**
1990	117 807	30 652[e]	116 742	99 449	20 059[e]	30 009	**400 156**
1991	153 399	40 791[e]	110 643	91 500	22 298[e]	20 895	**415 359**
1992	138 755	34 553[e]	77 580	70 648	17 836[e]	22 677	**349 509**
1993	166 823	40 224[e]	89 570	55 532	15 061[e]	22 830	**397 544**
1994	136 828	41 789[e]	94 006[e]	49 788	18 288[e]	37 887[e]	**378 586[e]**
1995	112 241	34 235[e]	75 953[f]	45 853[e]	23 669[e]	33 621[e]	**325 572[e]**
1996	95 527	31 083[d]	83 629[e]	44 727[f]	23 988[e]	32 051[e]	**310 996[e]**
1997	92 924	34 956[d]	83 600[f]	47 659[e]	30 016	21 479	**310 634[f]**

[a] Crown land only.
[b] Estimates are provided to Forestry Canada prior to final tabling of MoF annual reports.
[c] Other includes: N.W.T., Sask., Man., N.S., P.E.I., Nfld.
[d] Preliminary.
[e] Revised.
[f] Estimate by provincial or territorial forestry agency.

Data source: Canadian Council of Forest Ministers, 1998.

Total area (ha) of stand tending on Crown and private land from 1981 to 1997, by province

Year	B.C.[a]	Alta.	Ont.	Que.	N.B.	Other[b]	Canada
1981	37 677	634[c]	41 444	12 686	17 618	14 919	**124 978**
1982	26 031	695[c]	54 506	6 446[d]	18 263	13 753	**119 694**
1983	15 739	245[c]	47 560	15 960	30 488	16 009	**126 001**
1984	30 865	510[c]	69 994	21 220	40 040	26 130	**188 759**
1985	29 416	1 005[c]	101 062	19 800	45 700	27 890	**224 873**
1986	73 499	825	95 921	24 201	38 313	29 491	**262 250**
1987	92 271	321	101 476	36 193	48 483	23 393	**302 137**
1988	75 347	2 797	97 136	53 727	53 114	19 757	**301 878**
1989	117 245	4 725	127 839	48 510	55 398	22 415	**376 132**
1990	109 335	1 987[e]	123 544	71 634	50 819	28 435	**384 935[e]**
1991	118 635[f]	680[e]	90 795	78 720	48 768	25 592	**362 020[e]**
1992	119 595	2 923[e]	75 590	84 807	36 914	23 877	**342 492[e]**
1993	133 389	2 507[e]	77 083	90 023	41 099	22 958	**365 654[e]**
1994	127 227	6 135[e]	77 101[f]	96 638	35 752	24 172	**367 025[e]**
1995	120 337	7 157[e]	77 009	97 764[e]	48 087[f]	24 549[e]	**374 903[e]**
1996	150 250	11 172[g]	95 869[e]	103 179[f]	68 550	28 713	**457 735[e]**
1997	143 076	4 673[g]	95 595[e]	106 583[f]	81 841[f]	25 922	**457 692[f]**

[a] Crown land only.
[b] Includes Nfld., P.E.I., N.S., Man., and Sask.
[c] Thinning only.
[d] Precommercial thinning only.
[e] Revised.
[f] Estimate by provincial or territorial forestry agency.
[g] Preliminary.

Data source: Canadian Council of Forest Ministers, 1998.

Total silviculture expenditures ('000$)[a] on Crown and private land 1985, 1988, and 1990 to 1996

Year	B.C.[a]	Alta.	Ont.	Que.	N.B.	Other[b]	Canada
1985	167 800	15 000	116 100	113 300	23 500	40 900	**476 600**
1988	301 000	15 300	121 400	185 600	31 600	50 000	**704 900**
1990	298 363	31 693	124 019	188 878	28 930	52 618	**724 501**
1991	395 869	31 644	112 963	179 131	34 075	49 175	**802 857**
1992	323 633[c]	40 707[d]	98 287[c]	162 533[e]	28 544[c]	53 754[c]	**706 072[e]**
1993	317 121[e]	38 128[c]	92 475[e]	144 494[e]	27 200[e]	46 984[d]	**666 404[e]**
1994	295 168[d]	38 677[d]	52 301[d]	133 150[d]	22 832[e]	49 158[d]	**591 287[e]**
1995	402 260[d]	70 490	130 712	131 739	27 111	47 419	**809 731**
1996	287 785[d]	83 916	77 312	97 188	36 613	46 805	**629 619**

[a] Public and Industry expenditures on silviculture.
[b] Includes Nfld., P.E.I., N.S., Man., Sask., Yukon, N.W.T.
[c] Preliminary.
[d] Estimate by provincial or territorial forestry agency.
[e] Revised.

Data source: Canadian Council of Forest Ministers, 1998.

DID YOU KNOW...

Almost 50% of all silviculture expenditures in Canada occur in B.C.

Size of clearcuts by ownership and by province for the latest period calculated

Province	Provincial Crown land	Private land
	Avg. size of cuts (ha)	
B.C.[a]	28.2	n/a
Alta.	23.5 (hardwoods)	n/a
Alta.	17.3 (spruce and pine)	n/a
Man.	10–49	n/a
Sask.	60–70 (hardwood)	n/a
Sask.	30–40 (softwood)	n/a
Ont.[b]	n/a	n/a
Que.	n/a	n/a
N.B.	30	50[c]
N.S.	<50	n/a
P.E.I.	3.5	3.1
Nfld.	<120[d]	n/a
Yukon	8.3	n/a
N.W.T.	15–25	n/a

(a) Updated statistics on cutblock size are on page 15.

(b) 1997/98 survey of 8 moose and moose/caribou management units:

moose:
- 46% had clearcut size of 0–50 ha
- 24% had clearcut size of 51–100 ha
- 30% had clearcut size of 101 to 260+

moose/caribou:
- 21% had clearcut size of 0–50 ha
- 21% had clearcut size of 51–100 ha
- 15% had clearcut size of 101–150 ha
- 43% had clearcut size of 150–260+

(c) Large operations; for private woodlots: <50 ha.

(d) For leased Crown land; for unalienated Crown land average cut size is 30 ha.

Data source: Canadian Council of Forest Ministers, 1998.

3.2 Forest Products and Economics

DID YOU KNOW...

The B.C. forest industry is a key contributor to the provincial economy. In 1997, it made up over 48%, or $16.8 billion, of total manufactured shipments.

Wood products accounted for 32.9%, up slightly from the previous year, and pulp and paper products accounted for 15.6%.

Data source: COFI, 1998.

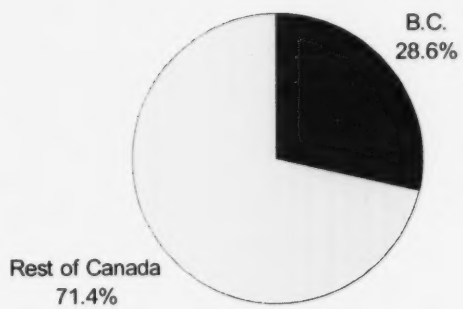
B.C. versus rest of Canadian forest industries: volume production by commodity – 1997

Lumber

Data source: COFI, 1998.

Total: 64.0 million m^3

Pulp

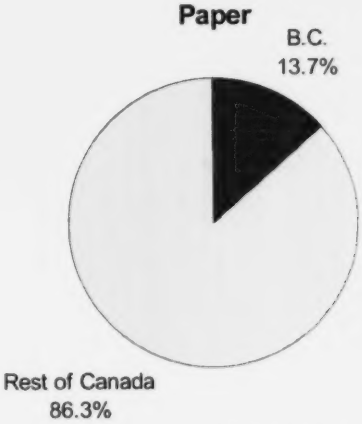


Data source: COFI, 1998.

Total: 24.8 million m^3

Volume production by commodity – continued

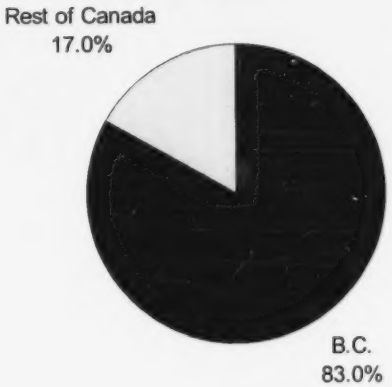
Paper



Data source: COFI, 1998.

Total: 19.0 million tonnes

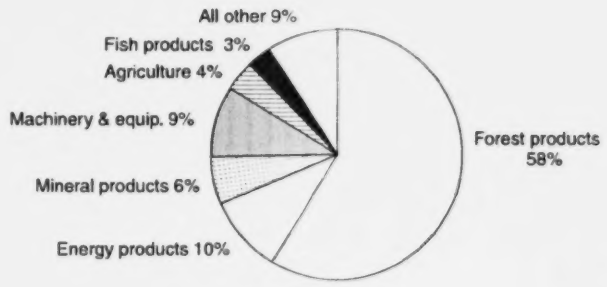
Plywood



Data source: COFI, 1998.

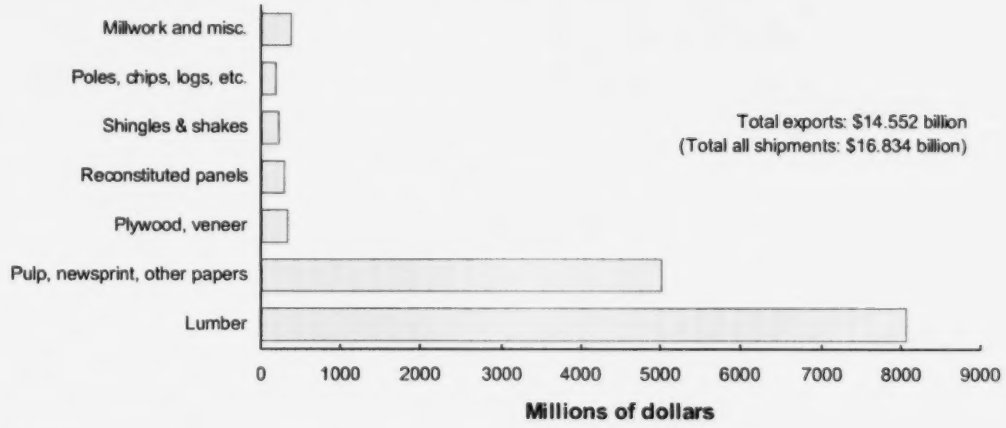
Total: 1.8 million m^3

B.C. exports – by product groups
1998 – $25.6 billion



Data source: BC Stats; Exports (B.C. origin) 1988–1997 revised.
Economics and Trade Branch, Ministry of Forests.

B.C. forest product exports 1997

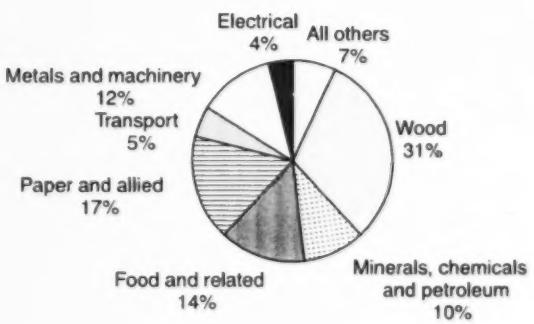


Data source: COFI, 1998.

B.C. forest product export destination 1997

Data source: COFI, 1998.

B.C. forest industry and the provincial economy – 1998



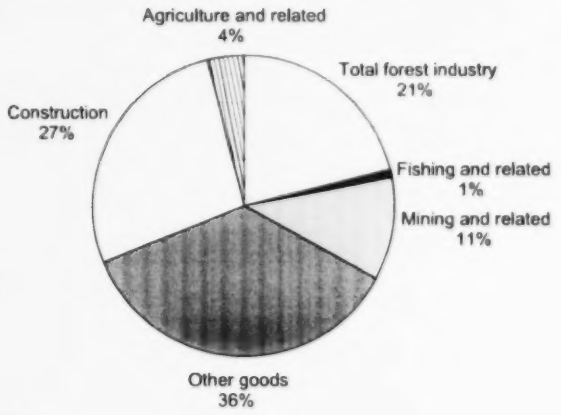
Total shipments
$33.8 billion

Data source: COFI, 1998.

DID YOU KNOW...

Among the goods-producing industries, the forest industry (a combination of the wood products, paper and allied industries and logging) is one of the largest contributors to B.C.'s gross domestic product.

B.C. gross domestic product
goods producing industries – 1998



1998: $22.3 billion
(1992 constant dollars)

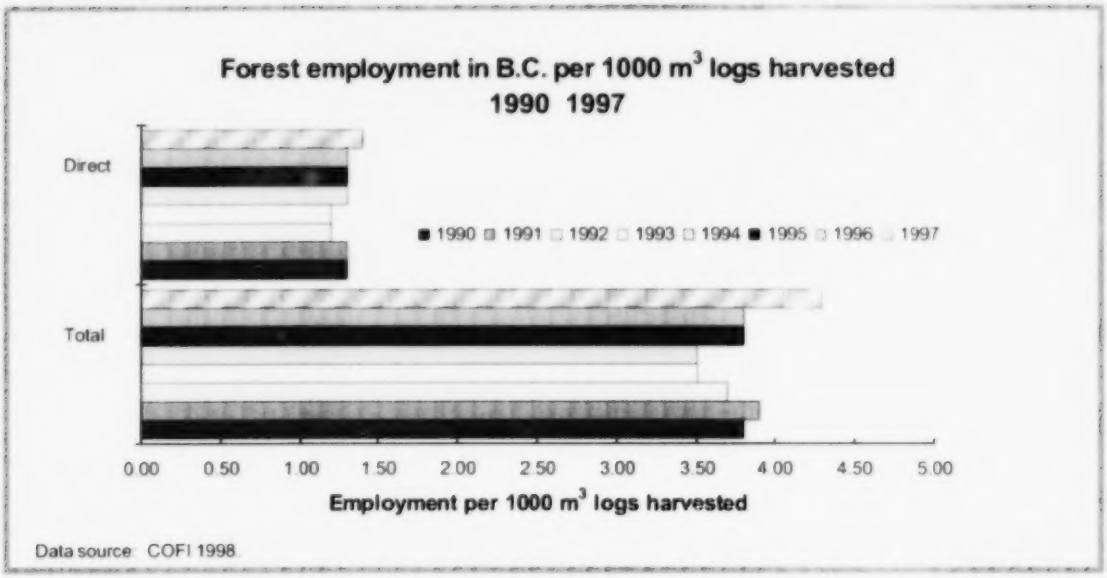
Data source: Stats Canada, Cat. no. 15-203.

Employment in the forest industry in B.C.

Year	Harvest ('000 m^3)	Logging	Wood	P & A	Total	Logging	Wood	P & A	Total
		(employees)				(employees/1000 m^3)			
1950	23 408	n/a	34 439	6 155	**n/a**	n/a	1.47	0.26	**n/a**
1955	29 280	n/a	41 434	8 640	**n/a**	n/a	1.42	0.30	**n/a**
1960	33 975	n/a	37 202	10 409	**n/a**	n/a	1.09	0.31	**n/a**
1965	43 413	18 746	40 499	14 176	**73 421**	0.43	0.93	0.33	**1.69**
1966	45 348	17 846	39 699	15 779	**73 324**	0.39	0.88	0.35	**1.62**
1967	44 505	17 369	37 582	16 533	**71 484**	0.39	0.84	0.37	**1.61**
1968	48 178	17 948	38 304	16 528	**72 780**	0.37	0.80	0.34	**1.51**
1969	53 487	20 279	39 284	17 312	**76 875**	0.38	0.73	0.32	**1.44**
1970	54 726	18 581	38 329	17 089	**73 999**	0.34	0.70	0.31	**1.35**
1971	56 515	18 364	41 652	18 327	**78 343**	0.32	0.74	0.32	**1.39**
1972	56 416	18 976	45 819	18 804	**83 599**	0.34	0.81	0.33	**1.48**
1973	70 093	21 716	49 549	19 782	**91 047**	0.31	0.71	0.28	**1.30**
1974	60 047	22 906	44 866	20 768	**88 540**	0.38	0.75	0.35	**1.47**
1975	50 077	18 046	38 655	20 225	**76 926**	0.36	0.77	0.40	**1.54**
1976	69 521	20 464	44 645	20 404	**85 513**	0.29	0.64	0.29	**1.23**
1977	69 969	21 125	47 605	20 320	**89 050**	0.30	0.68	0.29	**1.27**
1978	75 173	23 534	50 955	20 665	**95 154**	0.31	0.68	0.27	**1.27**
1979	76 194	24 940	51 369	20 998	**97 307**	0.33	0.67	0.28	**1.28**
1980	74 654	24 784	49 708	21 540	**96 032**	0.33	0.67	0.29	**1.29**
1981	61 818	20 017	46 627	20 660	**87 304**	0.32	0.75	0.33	**1.41**
1982	56 231	16 769	40 309	18 458	**75 536**	0.30	0.72	0.33	**1.34**
1983	71 369	20 411	40 392	17 390	**78 193**	0.29	0.57	0.24	**1.10**
1984	74 556	23 056	38 901	17 433	**79 390**	0.31	0.52	0.23	**1.06**
1985	76 868	21 870	39 603	16 850	**78 323**	0.28	0.52	0.22	**1.02**
1986	77 503	22 289	37 204	17 254	**76 747**	0.29	0.48	0.22	**0.99**
1987	90 591	23 236	42 425	17 662	**83 323**	0.26	0.47	0.19	**0.92**
1988	86 807	22 340	42 283	18 207	**82 830**	0.26	0.49	0.21	**0.95**
1989	87 414	22 437	42 416	18 643	**83 496**	0.26	0.49	0.21	**0.96**
1990	78 316	19 753	40 312	18 427	**78 492**	0.25	0.51	0.24	**1.00**
1991	73 675	18 393	35 562	18 427	**72 382**	0.25	0.48	0.25	**0.98**
1992	74 004	17 898	40 115	17 225	**75 238**	0.24	0.54	0.23	**1.02**
1993	79 239	18 979	41 939	17 469	**78 387**	0.24	0.53	0.22	**0.99**
1994	75 650	16 380	42 795	17 228	**76 403**	0.22	0.57	0.23	**1.01**
1995	76 471	18 655	41 068	17 631	**77 354**	0.24	0.54	0.23	**1.01**
1996	75 213	20 147	38 973	17 423	**76 543**	0.27	0.52	0.23	**1.02**
1997	75 213								
1998	65 984								
		Average employees/1000 m^3 harvested (1992–1996)				0.24	0.54	0.23	**1.01**

Data source: Harvest Data – Ministry of Forests, Harvest Database System.
Employment Data – Statistics Canada, Annual Survey of Manufactures & Logging Industry Catalogue 25-201-XPB.

Notes: Employment for logging includes working owners and partners for the years 1975 and later.
Wood – wood industries.
P & A – paper and allied industries.
m^3 – cubic metres.


Forest employment in B.C. per 1000 m3 logs harvested
1990 1997
Direct
Total
1990 1991 1992 1993 1994 1995 1996 1997
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00
Employment per 1000 m3 logs harvested
Data source: COFI 1998

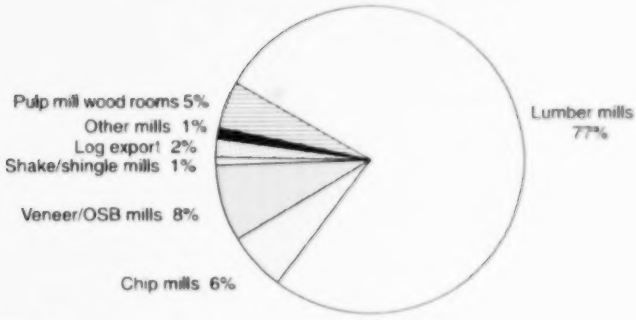
B.C. silviculture employment factors[a,b]

Treatment	Worker-days/hectare
Surveys	0.1
Site preparation	0.3
Planting	1.8
Brushing and weeding	1.0
Juvenile spacing	3.5
Pruning	6.0
Fertilization	0.1
Nurseries	1.0 person-day/1000 trees
Cone collection	0.5 person-day/hectolitre
Conifer release	2.5
Other[c]	1.0 worker-year/$100 000

(a) A worker-year is based on 220 eight-hour work days.
(b) An employment factor of 26.8 worker-years per million dollar expenditure is officially recognized for general silviculture activities. This includes direct, indirect and induced employment.
(c) Other includes contract implementation.

Data source: Forest Practices Branch.

British Columbia – estimated log and fibre usage
1998 harvest – 68.7 million m^3



Data source: Ministry of Forests.
Prepared by: Economics and Trade Branch.

World Statistics

CONTENTS

4 World Statistics

4.1 Finland 100

Silviculture treatments on public and small private lands in Finland from 1980 to 1998 100

Finland's public and small private sector silviculture investment and accomplishments for 1998 100

Commercial roundwood fellings in Finland from 1985 to 1998 101

4.2 New Zealand 102

New Zealand plantation forestry in summary 102

4.3 Sweden 103

Sweden's public and private silviculture accomplishments from 1985 to 1998 103

Sweden's public and private silviculture investment from 1985 to 1997 103

Commercial roundwood fellings in Sweden from 1981/82 to 1998 104

4.4 Other World Statistics 105

World softwood growing stock (chart) 105

World exports of softwood lumber (chart) 105

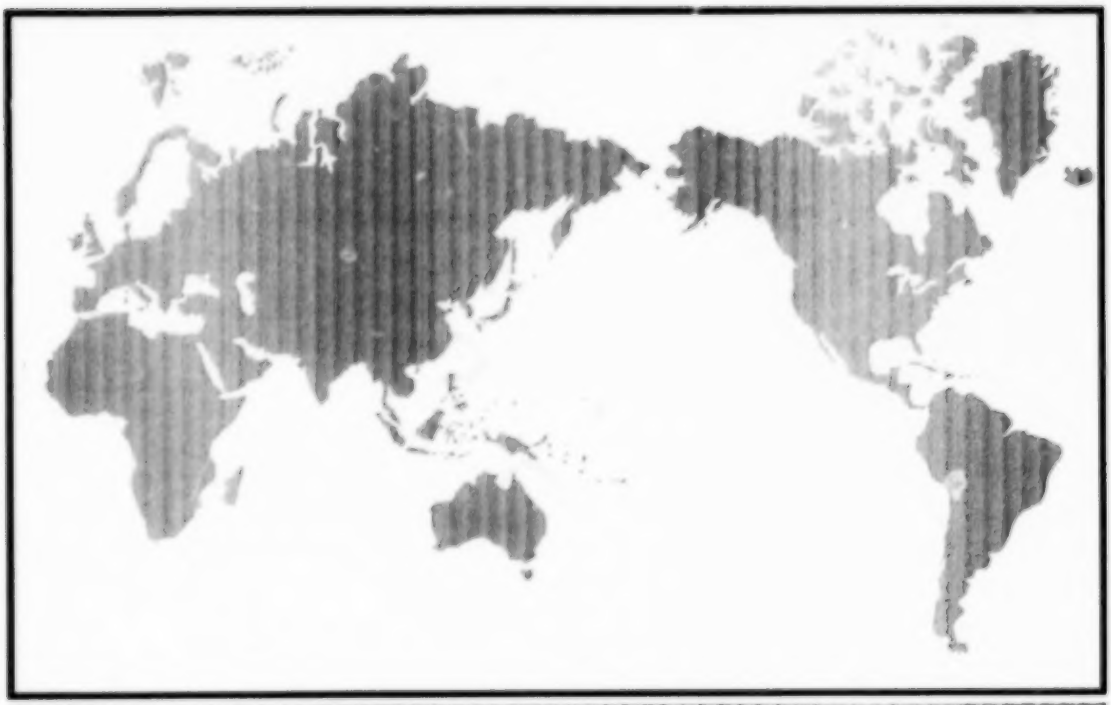
World exports of forest products – 1996 (chart) 106

World exports of wood pulp and newsprint (chart) 107

World softwood harvest (chart) 108

Ownership of commercial forest land base – 1998 (chart) 109

4 World Statistics



Did you know...

Forests constitute slightly over 3.4 billion hectares or 27% of the global land area. Total growing stock in 1990 was 384 billion cubic metres. Forests of the developed regions represent 42% of the global forest area and 43% of the growing stock. The share of the former USSR alone is 22% of the overall forest area.

Data source: Finnish Forest Research Institute, 1995

4.1 Finland

Silviculture treatments on public and small private lands (ha) in Finland from 1980 to 1998

Year	Preparation of regen. areas	Seeding and planting	Juvenile spacing	Fertilizing	Pruning
1980	268 000	128 700	317 100	87 226	n/a
1981	294 600	141 400	287 000	91 832	n/a
1982	298 000	151 000	318 400	109 758	n/a
1983	269 800	145 500	300 500	89 667	10 889
1984	257 200	140 500	286 300	79 514	11 055
1985	272 200	129 200	279 400	84 353	6 346
1986	253 400	133 500	258 900	86 661	6 598
1987	257 700	121 700	251 200	87 118	1 984
1988	252 900	110 900	218 600	79 147	12 967
1989	263 600	120 300	192 900	46 798	13 586
1990	246 000	121 130	201 000	47 655	11 302
1991	257 700	130 900	252 900	11 239	12 008
1992	224 600	122 500	233 100	5 028	8 705
1993	214 200	110 900	226 400	4 076	5 290
1994	198 200	108 000	164 500	6 003	2 362
1995	136 300	112 300	162 400	8 535	2 043
1996	202 100	119 100	154 500	16 918	2 247
1997	191 900	113 100	151 100	19 142	2 631
1998	194 400	111 300	201 300	21 239	3 041

Data source: Finnish Forest Institute annual reports.

Finland's public and small private sector silviculture investment and accomplishments for 1998

	Millions $ Cdn	Hectares
Preparation of regeneration areas	43.9	194 400
Seeding and planting	100.7	111 300
Juvenile spacing	49.7	201 300
Pruning	1.7	3 041
Forest fertilization	6.3	21 239
TOTAL	**202.3**	**531 280**

Data source: Finnish Forest Institute annual reports.

Commercial roundwood fellings in Finland from 1985 to 1998

Year	Fellings (million m^3)	
	Commercial	Total
1985	36.1	**43.6**
1986	31.9	**39.0**
1987	35.0	**42.9**
1988	38.3	**45.7**
1989	39.7	**47.1**
1990	36.4	**43.6**
1991	26.0	**34.5**
1992	29.7	**40.2**
1993	31.1	**42.0**
1994	40.6	**49.2**
1995	44.9	**51.0**
1996	39.9	**46.9**
1997	47.1	**52.9**
1998	51.0	**55.1**

Data source: The Finnish Forest Research Institute annual reports.

DID YOU KNOW...

Finland:

Forest land: 20 112 000 ha
Portion of land base: 66%
Forest land per capita: 3.90 ha

Data source: FAO, 1995.

4.2 New Zealand

New Zealand plantation forestry in summary

Area and standing volume statistics		April 1996	April 1997	April 1998
Estimated net stocked forest area (ha)		1 542 000	1 630 000	1 679 000
Growth characteristics	Average volume (000 m^3)	316 000	329 000	338 000
	Average standing volume (m^3/ha)	205	202	201
	Area-weighted average age (years)	13.1	12.9	12.9
Area by species (ha)	Radiata pine	1 396 000	1 480 000	1 520 000
	Douglas-fir	70 000	75 000	81 000
	Other exotic softwoods	33 000	32 000	32 000
	Other exotic hardwoods	43 000	43 000	46 000
Radiata pine area by tending regime (ha)				
Intensively tended with commercial thinning		287 000	288 000	
Intensively tended without commercial thinning		689 000	708 000	
Minimum tended with commercial thinning		49 000	143 000	
Minimum tended without commercial thinning		371 000	341 000	

Planting statistics	Year ended Mar 31, 1996	Year ended Mar 31, 1997	Year ended Mar 31, 1998
Estimated new planting (ha)	73 900	83 600	63 700
Restocking (ha)	26 300	28 200	29 700
Harvested area waiting restocking (ha)	19 300	30 000	27 800
Harvesting			
Area clear felled (ha)	30 500	31 500	32 400
Volume clear felled (TRVIB, 000 m^3)	15 246	15 039	
Volume production thinned (TRVIB, 000 m^3)	1 255	853	
Total volume removed (TRVIB, 000 m^3)	16 501	15 892	15 582
Area clear fell yield (m^3/ha)	500	477	481
Area-weighted average clear fell age for radiata pine (years)	27.6	27.8	28.2
Estimated planted forest roundwood removal (000 m^3)	16 562	15 964	

Forest management and average costs in 1997:

Planting: $419/hectare (ranges from $280–560) (includes cost of seedlings)

Pruning: $1395/ha for 3 lifts (ranges from $415–1675)
59% of the plantation estate is pruned (991 000 ha of total 1 679 000 ha as of April 1998)
Average annual area pruned (1st lift): approx. 47 000 ha
Average total area pruned each year: approx. 141 000 ha

Spacing: $260/ha for 2 thins (ranges from $149–372)

Data source: New Zealand Ministry of Agriculture and Forests, New Zealand Industry Facts and Figures.

DID YOU KNOW...

New Zealand:
Forest land: 7 472 000 ha
Portion of land base: 28%
Forest land per capita: 1.97 ha

Data source: FAO, 1995.

4.3 Sweden

Sweden's public and private silviculture accomplishments (ha) from 1985 to 1998

Year	Cleaning	Site prep	Planting and seeding	Juvenile spacing	Fertilizing	Pruning	TOTALS
1985	190 000	171 000	184 000	370 000	130 000	0	**1 045 000**
1986	200 000	188 000	203 000	365 100	121 000	1 200	**1 078 300**
1987	190 000	174 000	195 000	353 000	125 000	900	**1 038 900**
1988	180 000	177 000	200 000	353 000	95 000	1 300	**1 006 300**
1989	175 000	171 000	198 000	364 000	79 000	1 100	**990 100**
1990	148 000	172 000	192 000	368 000	69 000	800	**952 800**
1991	104 000	153 000	179 000	310 000	43 000	900	**789 900**
1992	82 000	124 000	152 000	241 000	29 000	700	**628 700**
1993	69 000	121 000	136 000	204 000	27 000	400	**557 400**
1994	76 000	120 000	116 000	198 000	24 000	100	**534 100**
1995	73 000	137 800	115 800	186 900	27 300	700	**541 500**
1996	76 000	163 100	124 400	203 700	24 100	500	**591 800**
1997	78 000	163 200	136 800	200 700	18 800	600	**598 100**
1998		154 100	140 100	201 300			**495 500**

Data source: National Board of Forestry, 1992, 1996, 1998 and 1999.

Sweden's public and private silviculture investment ($Cdn)[a] from 1985 to 1997

Year	Cleaning[b]	Site prep	Planting and seeding	Juvenile spacing	Fertilizing	TOTALS
1985	16 597 000	25 579 000	130 766 000	77 128 000	25 579 000	**275 649 000**
1986	20 930 000	35 581 000	172 673 000	86 860 000	27 209 000	**343 253 000**
1987	22 927 000	34 289 000	167 243 000	90 861 000	30 167 000	**345 487 000**
1988	22 425 000	34 244 000	170 576 000	95 857 000	21 377 000	**344 479 000**
1989	27 950 000	38 649 000	211 207 000	122 856 000	19 147 000	**419 809 000**
1990	26 941 000	40 441 000	202 241 000	135 658 000	16 275 000	**421 556 000**
1991	17 642 000	36 774 000	213 396 000	116 623 000	12 755 000	**397 190 000**
1992	15 104 000	31 770 000	201 063 000	86 931 000	8 896 000	**343 764 000**
1993	8 967 000	23 775 000	130 433 000	67 142 000	6 050 000	**236 367 000**
1994	10 719 000	24 561 000	111 579 000	69 298 000	6 789 000	**222 946 000**
1995	11 132 500	31 955 820	123 176 460	67 788 630	7 335 510	**241 388 920**
1996	12 570 400	44 950 360	149 130 720	87 957 660	7 391 470	**302 000 610**
1997	11 107 200	37 323 840	148 988 880	77 831 460	5 555 400	**280 806 780**

[a] Exchange rate used was average rate for respective year.
[b] Prior to site preparation.

Data source: National Board of Forestry, 1992, 1996, 1998 and 1999.

DID YOU KNOW...

Sweden:

Forest land: 24 437 000 ha
Portion of land base: 60%
Forest land per capita: 2.75 ha

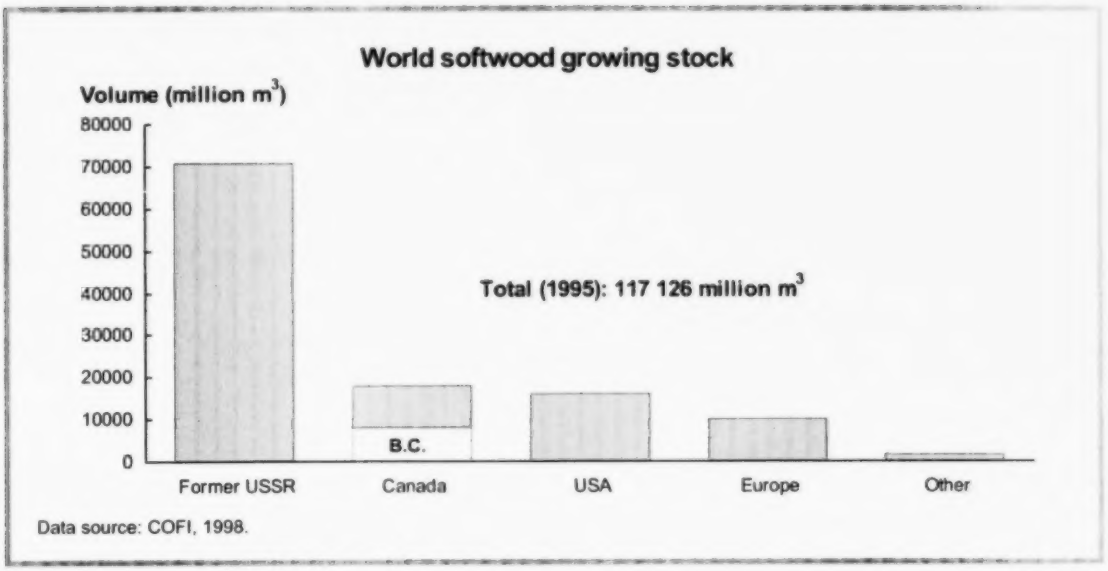
Data source: FAO, 1995.

Commercial roundwood fellings in Sweden from 1981/82 to 1998

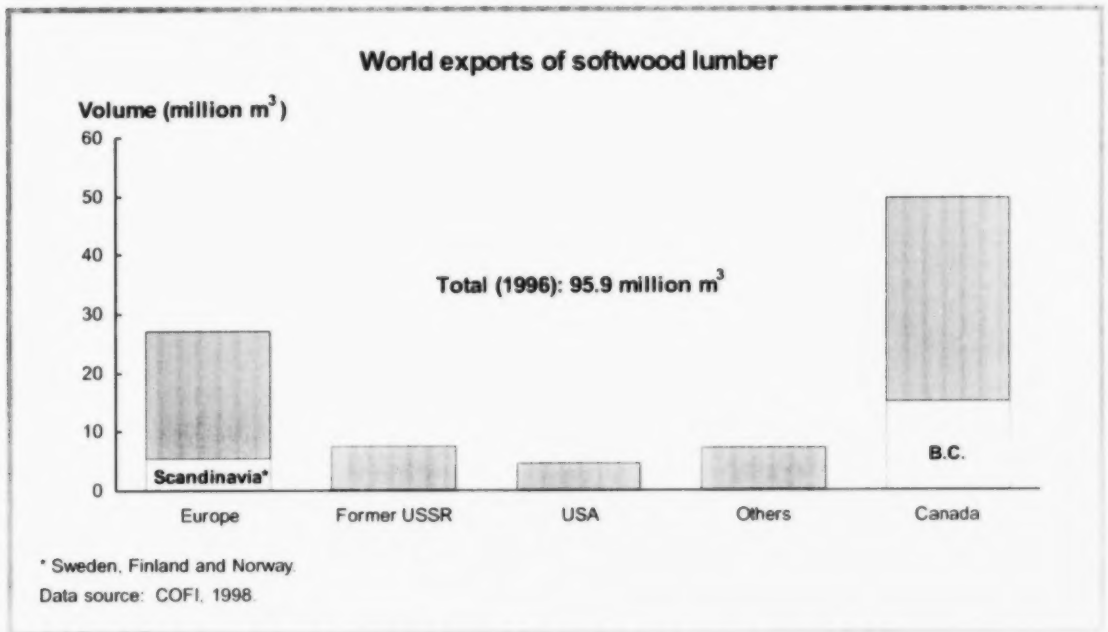
Year	Fellings (million m^3)	
	Commercial	Total
81/82	59.0	**61.6**
82/83	61.8	**65.4**
83/84	61.2	**65.3**
84/85	59.6	**63.0**
85/86	60.5	**63.1**
86/87	60.6	**64.4**
87/88	62.3	**65.5**
88/89	64.6	**67.5**
89/90	63.4	**65.5**
90/91	61.8	**64.7**
91/92	64.1	**66.3**
92/93	64.8	**67.2**
93/94	67.8	**70.1**
94/95	69.4	**71.7**
1995		**77.5**
1996		**69.5**
1997		**74.3**
1998		**74.5**

Data source: National Board of Forestry, 1992, 1996, 1998 and 1999

4.4 Other World Statistics



Data source: COFI, 1998.

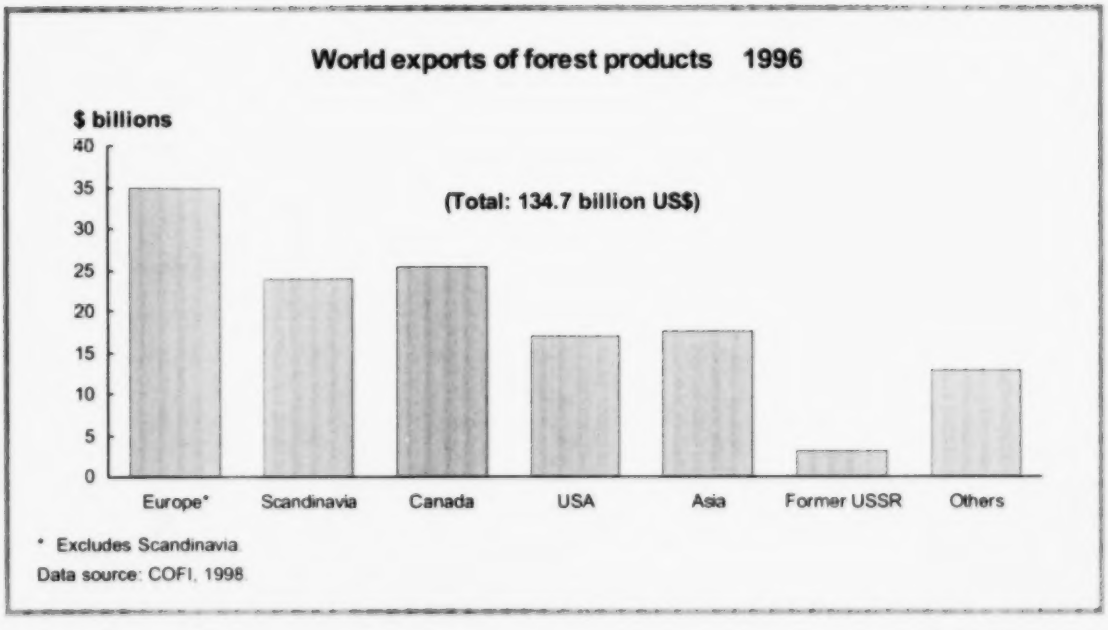


* Sweden, Finland and Norway.

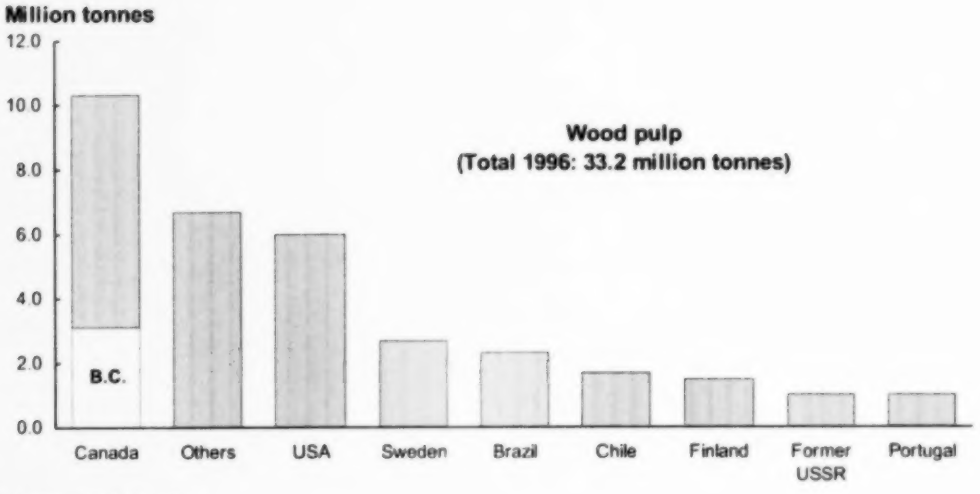
Data source: COFI, 1998.

DID YOU KNOW...

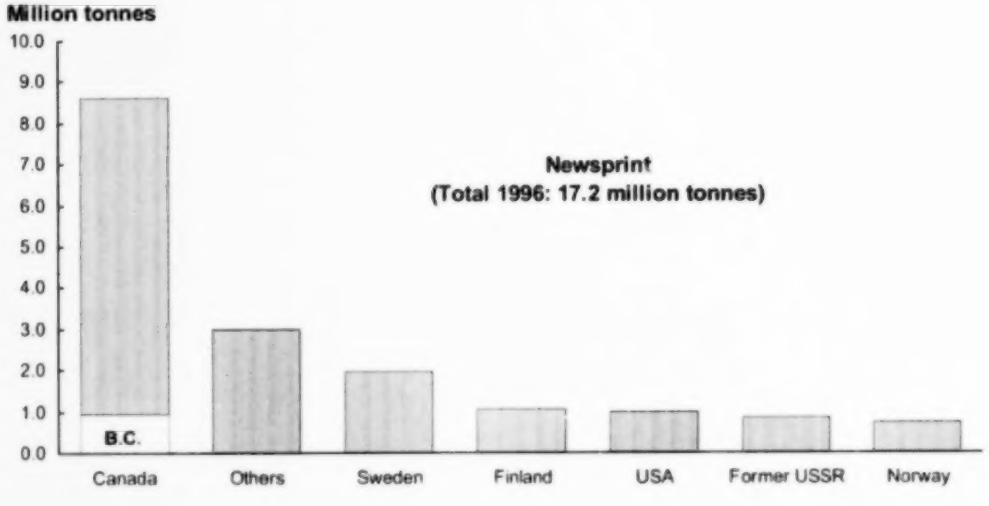
Canada is the world's largest exporter of softwood lumber, and B.C. is the largest contributor to Canada's softwood lumber exports.



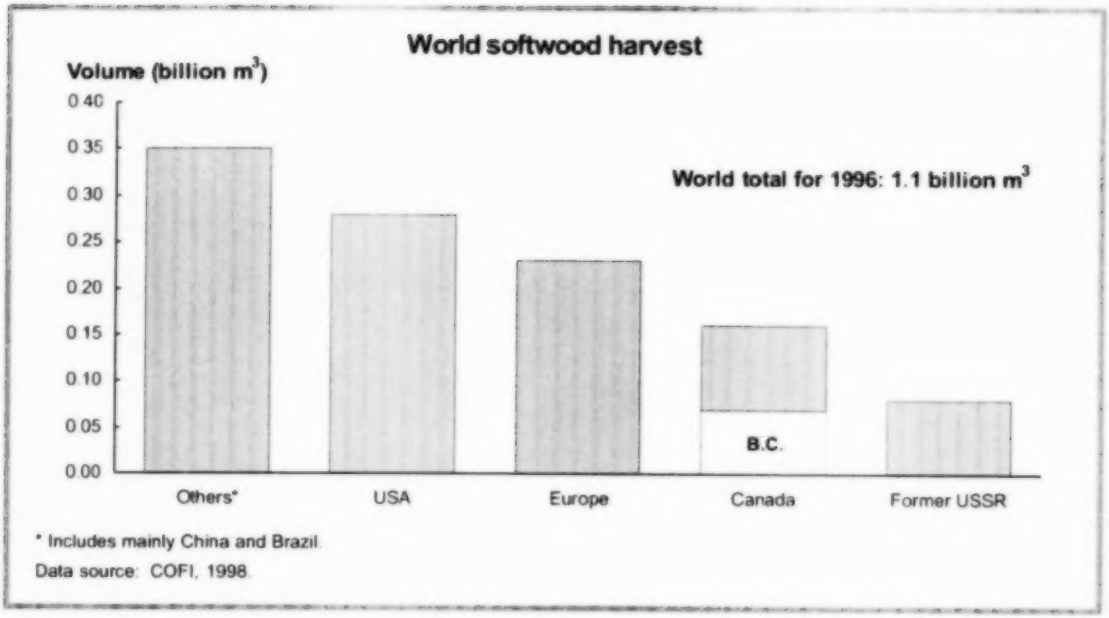
World exports of wood pulp and newsprint

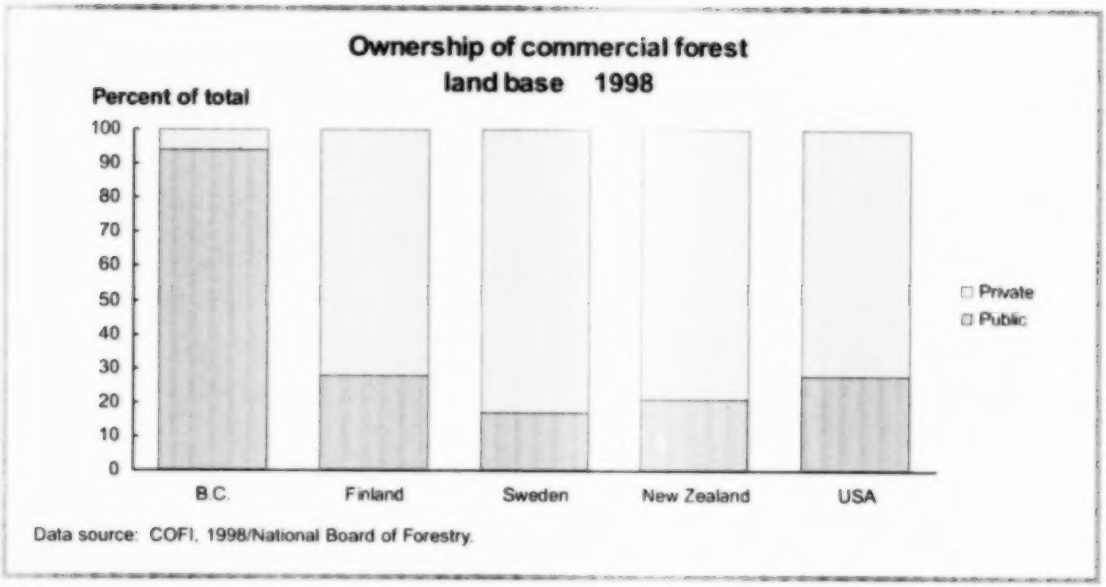


Data source: COFI, 1998.



Data source: COFI, 1998


World softwood harvest
Volume (billion m3)
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
World total for 1996: 1.1 billion m3
B.C.
Others*
USA
Europe
Canada
Former USSR
* Includes mainly China and Brazil.
Data source: COFI, 1998.



Data source: COFI, 1998/National Board of Forestry.

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Skogsstyrelsen National Board of Forestry (Sweden)
http://www.svo.se

INDEX

INDEX

allowable annual cut 78
brushing
  average cost 65, 66
  chemical 44, 45, 46, 66
  manual 44, 45, 46, 65
  total 44
clearcuts 84
cutblock size
  Crown land 15, 84
  private land 84
  provincial average 15, 84
employment 91, 92
expenditures
  brushing 65, 66
  fertilization 69
  planting 64
  pruning 68
  silviculture by region 59, 60
  silviculture treatments 61
  site preparation 63
  spacing 66, 67
  surveys 62, 70
  total 83
  weed control 71
exports
  B.C. 88, 89
  world
    forest products 106
    newsprint 107
    softwood lumber 105
    wood pulp 107
fertilization
  area 48, 49
  average cost 69
Finland
  commercial roundwood fellings 101
  silviculture investment and accomplishments 100
  silviculture treatments 100
forest health
  bark beetles 52, 53
  defoliators 52, 54
  total timber damaged 55
  weed control 58
  wildfires 56, 57
forest land base 109
forest products
  B.C./Canada 85, 86, 87, 88, 89
forest regions 2
harvesting
  area 2, 8, 9, 10, 11
  by province 79
  Canada 80
  Crown land 9, 10
  cutblock size 15
  harvest type 11
  land available 78
  land status 8
  private land 9, 10
  timber land base 2
  total 8
  usage 93
  world statistics 99, 101, 102, 104, 106
New Zealand
  plantation forestry 102
NSR land 25
ownership of commercial forest 109
planting
  area 32, 33
  average cost 64
  by province 81
  cumulative 35
  diversity 43
  number of seedlings 36, 37, 39
  species 39, 41
  stock types 39, 41
pruning
  area 50
  average cost 68
regeneration 34
  brushing *see* brushing
  planting *see* planting
  site preparation *see* site preparation
  surveys *see* surveys
revenue 13, 14
silviculture
  area treated
    B.C. *see* specific treatments
  Finland 100
  New Zealand 102
  Sweden 103
  expenditures *see* expenditures

site preparation
all methods 27
average cost 63
burning 28
by province 82
chemical 29
mechanical 28
other 30
softwood growing stock 105
softwood harvest 108
spacing
area 47, 48
average cost 66, 67
species diversity 43
stand tending
by province 83
fertilization 48, 49
pruning 50
spacing 47, 48
surveys
average cost 62, 70
Crown land 24
not satisfactorily restocked 25
total 24
Sweden
commercial roundwood fellings 104
silviculture accomplishments 103
silviculture investment 103
timber land base 2
volume of products billed 12
weed control 58, 71